# RADCLIFFE CATALOGUE

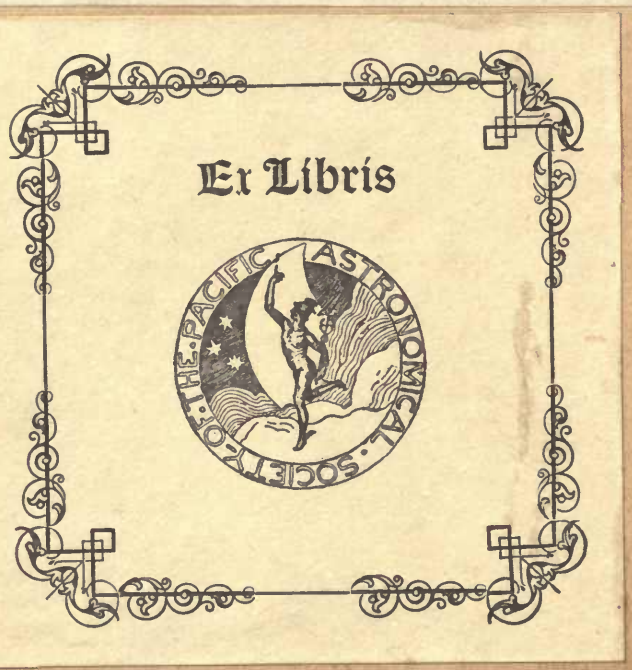
OF

# 1772 STARS

FOR THE EPOCH

# 1900

*RAMBAUT*



# THE

# RADCLIFFE CATALOGUE OF STARS

FOR

# 1900.

OXFORD : HORACE HART, M.A.
PRINTER TO THE UNIVERSITY

# CATALOGUE

OF

# 1772 STARS,

CHIEFLY COMPRISED WITHIN THE ZONE 85°–90° N.P.D.,

## FOR THE EPOCH

# 1900,

*DEDUCED FROM OBSERVATIONS MADE AT THE RADCLIFFE OBSERVATORY, OXFORD, DURING THE YEARS*

## 1894—1903.

*UNDER THE DIRECTION OF*

ARTHUR A. RAMBAUT, M.A. (DUBL. ET OXON.),

D.SC., F.R.S., F.R.A.S., M.R.I.A.,

RADCLIFFE OBSERVER, OXFORD.

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His Grace the Duke of Bedford, K.G.

The Right Hon. the Earl of Jersey, G.C.B.

The Right Hon. the Viscount Peel.

The Right Hon. Sir Edward Grey, Bart., P.C., M.P.

Sir William R. Anson, Bart., M.P., Warden of All Souls College.

The Rev. Henry Boyd, D.D., Principal of Hertford College.

# ERRATA

## IN THE RADCLIFFE CATALOGUES OF STARS FOR 1845, 1860, AND 1890.

All known errors except such as have been published in the first two Radcliffe Catalogues are given in the following lists. Some of these have already appeared as *errata* in the volumes of *Radcliffe Observations.*

### Radcliffe Catalogue of 6317 Stars for 1845·0.

| Page. | No. | Column. | For | Read |
|---|---|---|---|---|
| 26 | 421 | Mean R.A. (R.) ... ... ... | $1^h\ 14^m\ 27^s{\cdot}64$ | $1^h\ 14^m\ 28^s{\cdot}26$ |
| 37 | 616 | Mean N.P.D. (R.) ... ... ... | $11^\circ\ 33'\ 18''{\cdot}0$ | $11^\circ\ 33'\ 15''{\cdot}5$ |
| 48 | 826 | Mean R.A. (R.) ... ... ... | $2^h\ 44^m\ 41^s{\cdot}98$ | $2^h\ 44^m\ 41^s{\cdot}00$ |
| 49 | 823 | Mean N.P.D. (R.) ... ... ... | $43^\circ\ 12'$ | $42^\circ\ 58'$ |
| 52 | 884 | Precession ... ... ... ... ... | $+3^s{\cdot}998$ | $+3^s{\cdot}988$ |
| 64 | 1103 | Magnitude ... ... ... ... ... | 7·5 | 5·0 |
| ,, | ,, | Estimates of Magnitude ... ... | 3 | 1 |
| ,, | ,, | Number of Observations R.A. | 3 | 1 |
| ,, | ,, | Mean Year (R.) ... ... ... | 57·0 | 56·0 |
| 70 | 1200 | Mean R.A. (R.) ... ... ... | $4^h\ 10^m\ 3^s{\cdot}59$ | $4^h\ 10^m\ 4^s{\cdot}57$ |
| 92 | 1594 | Mean R.A. (R.) ... ... ... | $5^h\ 47^m\ 30^s{\cdot}88$ | $5^h\ 47^m\ 29^s{\cdot}88$ |
| 108 | 1876 | Mean R.A. (R.) ... ... ... | $6^h\ 54^m\ 30^s{\cdot}37$ | $6^h\ 54^m\ 32^s{\cdot}37$ |
| 109 | 1876 | Ordinal Number ... ... ... | 1676 | 1876 |
| 124 | 2154 | Magnitude ... ... ... ... ... | 8·9 | 9·1 |
| ,, | ,, | Estimates of Magnitude ... ... | 4 | 3 |
| ,, | ,, | Mean R.A. (R.) ... ... ... | $8^h\ 21^m\ 6^s{\cdot}50$ | $8^h\ 21^m\ 6^s{\cdot}36$ |
| ,, | ,, | Number of Observations R.A. | 4 | 3 |
| ,, | ,, | Mean Year (R.) ... ... ... | 52·1 | 54·1 |
| 124 | 2155 | Magnitude ... ... ... ... ... | 9·0 | 8·7 |
| ,, | ,, | Estimates of Magnitude ... ... | 2 | 3 |
| ,, | ,, | Mean R.A. (R.) ... ... ... | $8^h\ 21^m\ 7^s{\cdot}20$ | $8^h\ 21^m\ 7^s{\cdot}07$ |
| ,, | ,, | Number of Observations R.A. | 1 | 2 |
| ,, | ,, | Mean Year (R.) ... ... ... | 52·1 | 49·2 |
| 127 | 2199 | Mean N.P.D. (R.) ... ... ... | $42^\circ\ 43'\ 49''{\cdot}8$ | $22^\circ\ 43'\ 49''{\cdot}8$ |
| 130 | 2260 | Precession ... ... ... ... ... | $+3^s{\cdot}838$ | $+3^s{\cdot}867$ |
| ,, | ,, | Sec. Var. ... ... ... ... ... | $-0^s{\cdot}111$ | $-0^s{\cdot}032$ |
| 138 | 2386 | Precession ... ... ... ... ... | $+4^s{\cdot}143$ | $+3^s{\cdot}779$ |
| 139 | 2386 | Mean N.P.D. (R.) ... ... ... | $48^\circ\ 19'\ 15''{\cdot}7$ | $48^\circ\ 19'\ 16''{\cdot}0$ |
| 144 | 2493 | Mean R.A. (G.) ... ... ... | $25^s{\cdot}49$ | $27^s{\cdot}49$ |
| 145 | 2493 | Mean N.P.D. (G.) ... ... ... | $40^\circ\ 23'\ 53''{\cdot}2$ | $40^\circ\ 22'\ 53''{\cdot}2$ |
| 165 | 2835 | Mean N.P.D. (R.) ... ... ... | $40^\circ\ 9'\ 16''{\cdot}3$ | $40^\circ\ 9'\ 18''{\cdot}3$ |
| 180 | 3128 | Magnitude ... ... ... ... ... | 7·4 | 7·3 |
| ,, | ,, | Estimates of Magnitude ... ... | 3 | 4 |
| ,, | ,, | Mean R.A. (R.) ... ... ... | $13^h\ 56^m\ 47^s{\cdot}84$ | $13^h\ 56^m\ 47^s{\cdot}85$ |
| ,, | ,, | Number of Observations R.A. | 3 | 4 |
| ,, | ,, | Mean Year (R.) ... ... ... | 56·4 | 56·6 |
| 180 | 3129 | Delete:—Magnitude: Estimates of mag.: Mean R.A. (R.): Number of Observations and Mean Year in R.A. (R.). | | |
| 182 | 3180 | Mean R.A. (R.) ... ... ... | $14^h\ 11^m\ 50^s{\cdot}22$ | $14^h\ 11^m\ 50^s{\cdot}29$ |
| 208 | 3635 | Mean R.A. (R.) ... ... ... | $16^h\ 54^m\ 23^s{\cdot}44$ | $16^h\ 54^m\ 23^s{\cdot}22$ |
| 215 | 3740 | Names ... ... ... ... ... | 69 Ophiuchi $\beta$ | 60 Ophiuchi $\beta$ |

## Radcliffe Catalogue of 6317 Stars for 1845·0 (*continued*).

| Page. | No. | Column. | For | Read |
|---|---|---|---|---|
| 218 | 3807 | Mean R.A. (R.) ... ... ... | $17^h\ 55^m\ 4^s{\cdot}72$ | $17^h\ 55^m\ 4^s{\cdot}34$ |
| 230 | 4013 | Precession ... ... ... ... ... | $+2^s{\cdot}162$ | $+1^s{\cdot}162$ |
| 232 | 4031 | Precession ... ... ... ... ... | $+1^s{\cdot}966$ | $+1^s{\cdot}998$ |
| 247 | 4271 | Adopted P.M. ... ... ... ... | $+0''{\cdot}09$ | $-0''{\cdot}09$ |
| 295 | 5111 | Precession ... ... ... ... ... | $+14''{\cdot}24$ | $-14''{\cdot}24$ |
| 312 | 5438 | Mean R.A. (R.) ... ... ... ... | $21^h\ 46^m\ 46^s{\cdot}24$ | $21^h\ 46^m\ 46^s{\cdot}08$ |
| ,, | ,, | Number of Observations R.A. | 4 | 3 |
| ,, | ,, | Mean Year (R.) ... ... ... | 46·4 | 46·2 |
| 312 | 5439 | Mean R.A. (R.) ... ... ... | $21^h\ 46^m\ 46^s{\cdot}56$ | $21^h\ 46^m\ 46^s{\cdot}58$ |
| ,, | ,, | Number of Observations R.A. | 4 | 5 |
| ,, | ,, | Mean Year (R.) ... ... ... | 48·5 | 48·1 |
| 313 | 5431 | Mean N.P.D. (R.) ... ... ... | $25^\circ\ 29'\ 19''{\cdot}3$ | $25^\circ\ 29'\ 22''{\cdot}9$ |
| 316 | 5522 | Mean R.A. (R.) ... ... ... | $21^h\ 56^m\ 32^s{\cdot}61$ | $21^h\ 56^m\ 33^s{\cdot}29$ |
| 341 | ... | Sec. Var. and Adopted P.M., headings should be interchanged. | | |
| 347 | 6044 | Mean N.P.D. (R.) ... ... ... | $39^\circ\ 19'\ 53''{\cdot}2$ | $32^\circ\ 19'\ 53''{\cdot}2$ |
| 351 | 6100 | Mean N.P.D. (R.) ... ... ... | $46^\circ\ 46'\ 52''{\cdot}5$ | $46^\circ\ 46'\ 57''{\cdot}5$ |
| 354 | 6190 | Precession ... ... ... ... ... | $-2^s{\cdot}871$ | $+2^s{\cdot}871$ |
| 359 | 6236 | Mean N.P.D. (R.) ... ... ... | $39^\circ\ 22'\ 20''{\cdot}8$ | $39^\circ\ 32'\ 20''{\cdot}8$ |

## Radcliffe Catalogue of 2386 Stars for 1860·0.

| Page. | No. | Column. | For | Read |
|---|---|---|---|---|
| 27 | 440 | Mean N.P.D. ... ... ... ... | $93^\circ\ 22'\ 18''{\cdot}4$ | $93^\circ\ 22'\ 18''{\cdot}0$ |
| ,, | ,, | Mean Year... ... ... ... ... | 59·5 | 59·0 |
| ,, | ,, | Number of Observations ... | 4 | 5 |
| 54 & 55 | 931 | Name of Star ... ... ... ... | * | Oeltz. Arg. (N.Z.) 9703 |
| 54 & 55 | 932 | Name of Star ... ... ... ... | Oeltz. Arg. (N.Z.) 9703 | Oeltz. Arg. (N.Z.) 9704 |
| 92 | 1581 | Annual P.M. in R.A. ... ... | $+0^s{\cdot}023$ | $+0^s{\cdot}006$ |

## Radcliffe Catalogue of 6424 Stars for 1890·0.

| Page. | No. | Column. | For | Read |
|---|---|---|---|---|
| ix | ... | *da* 1891 ... ... ... ... ... | $+0^s{\cdot}100$ | $+0^s{\cdot}085$ |
| ,, | ... | $d\Delta$ ,, ... ... ... ... ... | $-0''{\cdot}339$ | $-0''{\cdot}240$ |
| ,, | ... | $d\omega$ ,, ... ... ... ... ... | $-0''{\cdot}232$ | $+0''{\cdot}266$ |
| 10 | 196 | Mean R.A.... ... ... ... ... | $0^h\ 50^m\ 38^s{\cdot}795$ | $0^h\ 50^m\ 38^s{\cdot}807$ |
| ,, | ,, | Proper Motion ... ... ... ... | $+0^s{\cdot}0005$ | $+0^s{\cdot}0050$ |
| 60 | 1314 | Constellation ... ... ... ... | Orionis ... ... S | Orionis ... ... ... |
| ,, | ,, | Magnitude... ... ... ... ... | Var. | 8–7 |
| ,, | ,, | Delete the first footnote. | | |
| 126 | 2810 | Constellation ... ... ... ... | Seztantis | Sextantis |
| 179 | 3995 | Lalande, 1800 ... ... ... ... | 28 09 | 28209 |
| 183 | 4055 | Sec. Var. ... ... ... ... ... | $-0''{\cdot}394$ | $-0''{\cdot}404$ |
| 231 | 5141 | Mean N.P.D. ... ... ... ... | $90^\circ\ 27'\ 35''{\cdot}00$ | $90^\circ\ 27'\ 35''{\cdot}73$ |
| ,, | ,, | Delete the Proper Motion (vide *Astronomical Journal* 422) | | |
| 232 | ... | Second footnote ... ... ... ... | 5190 | 5189 |

# INTRODUCTION.

THE present Catalogue of Stars contains the results of observations made with the transit circle of the Radcliffe Observatory between the years 1894 and 1903, both inclusive. During those years many things occurred to interrupt the progress of the work, and more than once it was unavoidably laid aside altogether for considerable periods of time. In the years 1894 and 1895 very little was done beyond observing some clock stars, whose places appear in the catalogue, and redetermining the positions of a few stars included in the *Radcliffe Catalogue for* 1890. The observations of the year 1903 were almost entirely confined to clock stars, reflexion observations, and a few working list stars at wide intervals which had previously eluded observation. Regular systematic observations began in March, 1896. The death of my predecessor—Mr. E. J. Stone, F.R.S.—which occurred on May 9 in the following year, naturally caused some interruption, and though systematic work was recommenced soon after my appointment in the following July as Radcliffe Observer, several other causes conspired to delay the work, such as the erection of the chronograph and various experiments which were found necessary before it could be brought into regular use, alterations and improvements in the transit circle itself which will be described below, extensive repairs to the building of the Observatory, and of late years the work with the New Double Equatorial (of 24 inches and 18 inches aperture) erected in 1902, which drew off a good deal of the attention of the staff from the transit circle work. But, although in consequence the number of stars included in the catalogue is small in proportion to the length of time over which the work has extended, these interruptions have not been allowed in any way to impair the precision of the results, and at all times the observations have been made with the most scrupulous care, and nothing conducive to accuracy which skill or experience in the use of the instrument could suggest has been omitted. The results are consequently of a high order of accuracy, as is shown by the tests which have been applied and which are described in the section of this Introduction entitled 'Accuracy of the Results'.

Shortly after the publication of the *Radcliffe Catalogue for* 1890, a new working list was compiled by Stone. The 1890 Catalogue was intended to contain all stars down to the seventh magnitude from the equator to 115° N.P.D., with fainter stars where *lacunae* occurred, and it included many stars south of 115° N.P.D. for comparison with the places of the Cape Catalogue, 1880. The new working list extended the Radcliffe zone of observation from the equator to 85° N.P.D. It also included those stars of Dr. Downing's list of 834 Zodiacal Stars—published as an appendix to the *Nautical Almanac* for 1897—which had not been included in the *Radcliffe Catalogue for* 1890. To this list a small number of stars in various parts of the sky were subsequently added, e. g. Greenwich clock stars, some *Nautical Almanac* stars which are not clock stars, azimuth stars, comet comparison stars, and various stars observed by request for proper motion or for other reasons.

The present catalogue gives the position of every star down to the seventh magnitude contained in the zone 85°—90° N.P.D. with very few exceptions, and these occur only in the case of double or multiple systems. In it will also be found the position of every star in Dr. Downing's Zodiacal list which has not been already included in the Radcliffe Catalogue for 1890, with one exception, viz. the star described in that list as D.M. +27°, 725. It is clear that the magnitude given for this star is in error. A star at the given position has been observed at Oxford on four different occasions, and its magnitude has been estimated as about 9·7. In the list of *errata* published in volume vi of Argelander's *Astronomische Beobachtungen zu Bonn*, p. 378, the following correction is given as applying to this star: 'Gr. statt 5·9 lese man 9·5'.

## The Transit Circle and Chronograph.

*Transit Circle.*—The instrument with which the observations have been made is the same as that used in the formation of Stone's *Radcliffe Catalogue for* 1890. It was constructed by Messrs. Troughton and Simms for Mr. R. C. Carrington, and was used by the latter at his Observatory at Redhill in compiling his catalogue of circumpolar stars. A somewhat detailed description of the instrument as used by him with a drawing made to scale will be found in the Introduction to Carrington's Redhill Catalogue. It is only necessary here to refer to this description in order to correct a curious error with regard to the dimensions of the circle which, although of slight importance, is worth setting right. It is there stated that the circle is 42 inches in diameter, but careful measurements recently made show that the outer edge is barely 40 inches in diameter, and the circle through the middle of the gold band on which the division lines are traced is as nearly as possible 39 inches in diameter.

An account of the erection of the instrument at Oxford and of some slight alterations then made in it is given by Main in the introduction to the *Radcliffe Observations* for 1862. Chief amongst these was the addition of four microscopes to those used by Carrington. The latter, which are denoted by the letters *A*, *B*, *C*, and *D* engraved upon them, had been placed, two of them at the ends of a horizontal diameter and two at the ends of a vertical diameter. The four new microscopes, denoted by the letters *a*, *b*, *c*, and *d*, were placed at the ends of two diameters, making angles of 45° with the vertical. The latter have been used exclusively ever since in ordinary star observations.

In the volume of *Radcliffe Observations* for 1880 will be found a reference to some improvements in the instrument effected by Mr. Stone before commencing the observations of stars included in his *Radcliffe Catalogue for* 1890. On the completion of that work he again overhauled and examined the instrument, but no structural change of importance was made except the substitution of a new breech which was provided with a screw motion in declination for the eyepiece slide, and a cover to protect the head of the R.A. micrometer when set at a fixed reading. The instrument was carefully cleaned, repainted, and readjusted before beginning observations of the stars included in the present catalogue. At this time two new wires were inserted and the equatorial intervals of the whole reticule determined from a large number of transits. The inclination of the horizontal wire was also examined at this time, and at frequent intervals during the whole course of observations. On July 26, 1888, a change was made in the mode of lighting, electric lamps being substituted for gas in the illumination of the wires, microscopes, collimators, Bohnenberger Nadir eyepiece, and clock face. This was undoubtedly a great improvement, getting rid, as it practically did, of all sources of heat from the Transit Circle room except the observer himself and a small hand-lantern used for reading with.

Shortly after assuming the charge of the Radcliffe Observatory, my attention was directed to the question of the stability of this instrument; and, on examining its foundations, I found that the two piers stood on a single solid mass of masonry, whilst two extensions of this in the form of a very solid wall running north and south formed the foundation for the piers on which the collimators rest. The floor of the observing room in the space between the four piers consisted of large flagstones which were in contact at the same time with the piers and the oaken floor beyond the piers. These were removed and replaced by an oaken floor completely independent of the piers and their foundations. Two small brick piers were at the same time built to support the weight of the other parts of the floor. In this way the telescope piers were entirely isolated. At the same time a change was made in the mode of supporting the mercury trough used for reflexion observations of stars. Up to that time it had always been placed on a wooden carriage running on the stone floor. In order to suspend it entirely on the piers themselves, the following method was adopted. A ledge of oak was bolted to the face of each pier about 3 feet 7 inches below the axis of the instrument. A plank of wood was then provided, of such a length that it just reached from one ledge to the other, and was furnished with india-rubber stucks or buttons, on which it rested. On the face of each of the collimator piers a similar ledge was attached. Another plank was also provided, which for reflexion

observations of southern stars was placed so that one end bore on the oaken ledge attached to the south collimator pier, and the other end on the first plank. For observations of northern stars the plank was placed so as to bear on the ledge of the north collimator pier. Thus in either case we were provided with a horizontal shelf resting wholly on the isolated piers, at any part of which the mercury trough could be placed. At the same time a circular trough was substituted for the rectangular one previously used in reflexion observations, and a distinct improvement was found to result in the character of the star images. This apparatus was found to work very satisfactorily, and the tremors previously experienced in reflexion observations were thereby considerably reduced. A rectangular copper trough, with amalgamated bottom resting on the isolated pier below the floor, continued to be used for the Nadir determinations. In these observations a distinct improvement in the steadiness of the reflected image of the wire resulted from the complete isolation of the piers. At about the same time the piers supporting the standard sidereal clock, and those on which the north and south collimators rest, were completely isolated from the floor.

While these changes were being carried out it was decided to retain the old arrangement by which the observer, when using the micrometer of either collimator, stood on a stone slab, which, though isolated from the floor, was built into the solid base of the collimator pier. This was a little unfortunate, since to this cause was subsequently traced a very small uncertainty in determining the flexure correction. It was not till June, 1902, however, that this was discovered, but attention having been directed to it, the stone slabs were removed and replaced by wooden bridges bearing on the oaken floor.

*Collimators.*—While we were engaged in carrying out these alterations it was found that the axis of the north collimator stood about three-quarters of an inch above the axis of rotation of the transit circle itself, that of the south collimator being too high by about half that amount. Accordingly the Y-bearings on which the collimators rest were sunk deeper into the piers, so that all three instruments now stand at the same level. To avoid sudden changes of temperature the collimators were, at the same time, enclosed in wooden cases, leaving only the eyepieces projecting.

In July, 1898, I met the Radcliffe Trustees for the first time after assuming the duties of Radcliffe Observer, and was by them authorized to carry out some improvements in connexion with this instrument which seemed to me to be desirable. I was thus enabled to obtain from Sir Howard Grubb an electric chronograph, and from Messrs. Troughton & Simms a new and improved breech-piece for the telescope.

*Breech-piece.*—This is fitted with two slides at right angles to each other. The first—the R.A. slide—carries the reticule of vertical wires, and is connected with a micrometer screw, the head of which is divided to 100 parts, and is furnished with an apparatus for counting the number of whole revolutions. It is also provided with a cover which protects the head from accidental displacements, and which can be turned back out of the way when the screw is in use.

The horizontal wire is attached to a separate slide actuated by another micrometer screw. This screw, in addition to the usual divided head, is furnished with a steel drum on which the divisions and numbers are embossed. Another embossed wheel for counting whole revolutions of the micrometer is also provided. By this means the entire reading of the micrometer is impressed on a paper strip which is wound from one reel to another. The impression is made by simply turning a milled head through about a quarter of a revolution.

The eyepiece is carried on two slides at right angles to each other, each of which is actuated by a rapid screw. The whole micrometer is mounted on a cylindrical tube which fits firmly in another cylinder rigidly attached to the conical tube of the telescope, and very fine adjustments both in focus and position by means of opposing screws are provided.

*Chronograph.*—The chronograph is of Sir Howard Grubb's latest pattern, and is similar in its main features to those supplied by him to the Cape of Good Hope Observatory and to the Perth

Observatory, West Australia. It is provided with two barrels $9\frac{1}{4}$ inches in diameter and 32 inches long. Each barrel will record four hours and fifty minutes' continuous work. They rotate once in a minute, and a second is represented by a space of nearly 0·5 inch. The clock-work is of Grubb's usual pattern, and is controlled electrically by means of his now well-known triple wiper apparatus. A single stylographic pen is used for recording the observer's signals and those from the clock.

The contact in the clock is effected in the same way as at the Royal Observatory, Greenwich. This method is described at p. viii of the volume of Greenwich Observations for 1856, and the apparatus is represented in figure 21, plate 8 of the same volume. The apparatus used at Oxford was constructed by Messrs. E. Dent & Co. It consists of a wheel of 60 teeth (of which one is cut away) mounted on the escape-wheel arbor. At every second one of these teeth presses together a pair of small platinum pillars attached to delicate springs. Means are provided for adjusting the distance between the platinum surfaces and the position of the pair of springs relatively to the escape-wheel arbor. The omission of the 60th tooth marks the beginning of each minute. This apparatus has been found to work very satisfactorily.

A current of 3 volts from two Leclanché cells is used in the primary clock circuit. Besides the use of such a feeble current, the further precaution is taken of employing a 'shunt' with suitable resistance to prevent sparking between the platinum surfaces, with the result that they seem unaffected by the current and remain without needing readjustment for long periods. The clock current passes through a relay which can be used to close three separate circuits. Of these only two have hitherto been in use. Through one of them passes a current from a battery of five Leclanché cells, which actuates the pens. The other contains a current of three cells, which passes through the 'detector' and the 'distributor', the latter acting as a second relay to switch on the 'corrector' current of seven cells.

This mode of control has been found to work very satisfactorily indeed. The dots representing a particular second in successive minutes lie within a space corresponding to less than one-tenth of a second of a straight line parallel to the axis of the cylinder from one end of the record to the other. This represents, of course, a degree of accuracy far beyond what is required, all that is absolutely essential being that the motion of the barrel should be sensibly uniform from one second to the next. It is, however, a great convenience, and facilitates very much the reading and measurement of the record, to have the dots so regularly placed instead of wandering at large about the sheet.

On the other hand, it might be urged as an objection that this convenience is purchased at the cost of essential accuracy, and that the fact of the rate of motion being altered during the course of a second, as is the case in this mode of control, by the action of the 'correctors', is at variance with the essential principle of the chronograph. While this is theoretically quite true, it can, however, be easily shown that the errors introduced in this way are absolutely insensible.

For the barrel is always travelling at one of three speeds, the *normal*, the *accelerated*, or the *retarded* velocity. If now we consider the motion of the barrel between any two consecutive clock beats, and suppose that at the first beat a point on its surface is moving with a velocity $v$, which after the lapse of a fraction of a second, $\tau$, is suddenly changed to the speed $v'$, then the distance between two such dots is obviously

$$v\tau + v'(1-\tau) = (v-v')\tau + v'.$$

If the observer's signal occurs at a fraction of a second $t$ after the first beat, then its distance from the first dot is

$$\text{(i) } vt \qquad \text{or} \quad \text{(ii) } (v-v')\tau + v't,$$

according as $t$ is less or greater than $\tau$. The fraction of a second between the first dot and the observer's signal as measured on the assumption of uniform motion is therefore

$$\text{(i) } \frac{vt}{(v-v')\tau + v'} \quad \text{or} \quad \text{(ii) } \frac{(v-v')\tau + v't}{(v-v')\tau + v'},$$

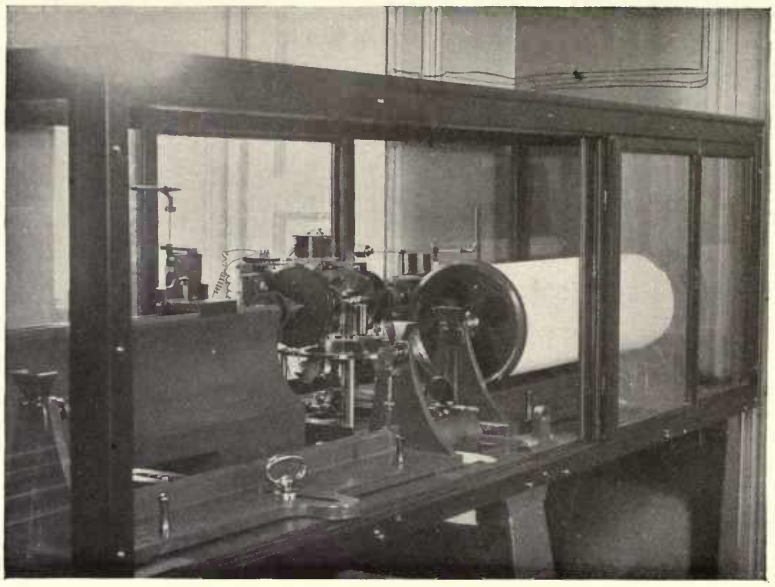

Fig. 1.—The Chronograph.

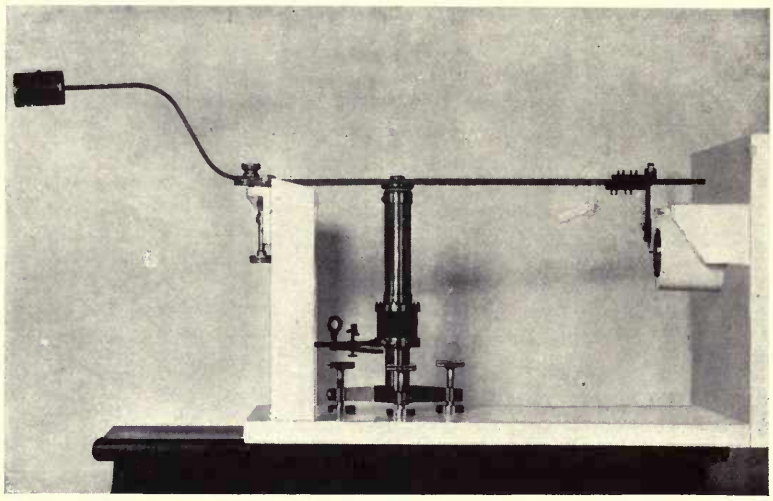

Fig. 3.—Apparatus as arranged for the Vertical Co-ordinate.

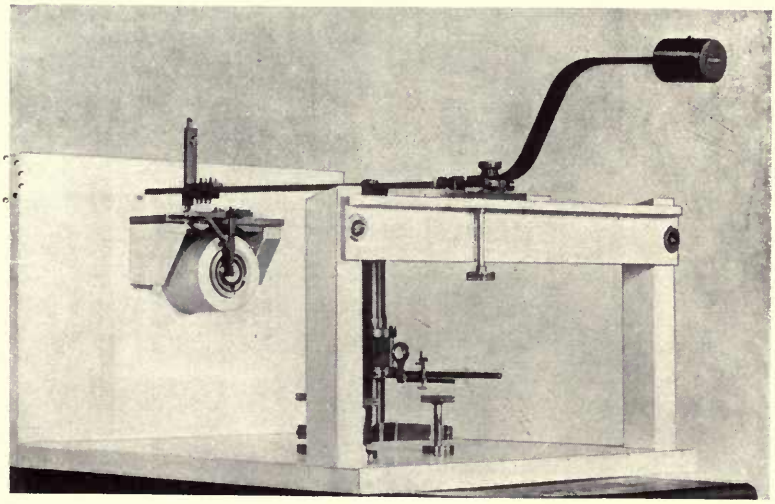

Fig. 4.—Apparatus as arranged for the Horizontal Co-ordinate.

and the error committed is the difference between one or other of these expressions and $t$. The error is therefore

$$\text{(i)}\ \frac{(v-v')(1-\tau)t}{(v-v')\tau+v'} \quad \text{or} \quad \text{(ii)}\ \frac{(v-v')\tau(1-t)}{(v-v')\tau+v'}.$$

In the first case $t$ is less than $\tau$, and in the second $1-t$ is less than $1-\tau$, and therefore in either case the error is less than

$$\frac{(v-v')\tau(1-\tau)}{(v-v')\tau+v'} \quad . \quad . \quad . \quad . \quad . \quad . \quad . \quad . \quad . \quad (\alpha)$$

In the Grubb control the differential gearing is such that $v-v' = \pm v/30$, and therefore the error committed is less than

$$\frac{\tau(1-\tau)}{\tau+29} \quad \text{or} \quad \frac{\tau(1-\tau)}{\tau-31},$$

according as the retarder or accelerator is brought into action. Hence we see that the greatest error which could be introduced from this cause occurs when

$$\tau = 0^s{\cdot}4958, \quad \text{or} \quad 0^s{\cdot}5041,$$

and is therefore in any case less than

$$0^s{\cdot}0085,$$

a negligible quantity in a single wire transit. But when, as at the Radcliffe Observatory, the same relay works both the pen-, and the control-, circuits the error is very much less than this. For with the existing arrangement the corrector, when it acts, comes down sharply within an inappreciable fraction of a second of the clock dot, so that the value of the expression ($\alpha$) is sensibly zero. But even allowing for a little possible delay on the part of the barrel in taking up the corrected speed, due to such causes as back-lash or inertia (though I can find no trace of any sensible delay of this kind), the value of $\tau$ can hardly amount to as much as $0^s{\cdot}1$. Putting this value for $\tau$ in the expression ($\alpha$), the greatest possible error on this extravagant hypothesis is found to be *less* than

$$\frac{0^s{\cdot}1 \times 0{\cdot}9}{29{\cdot}1} = 0^s{\cdot}0031,$$

which is of course quite inappreciable.

In the above discussion the motion of the barrel between two *consecutive* clock beats is considered. But the sixtieth second of each minute is not recorded, and consequently the circumstances in the interval between the fifty-ninth second of one minute and the first second of the next are slightly different from those contemplated. By similar reasoning it is, however, easy to show that in this case the error committed in measuring the sheet on the assumption of uniform motion is *less* than

$$\frac{(v-v')(2-\tau)\tau}{(v-v')\tau+2v'}; \quad . \quad . \quad . \quad . \quad . \quad . \quad . \quad . \quad . \quad (\beta)$$

or with the given values of $v-v'$ it is less than

$$\frac{\tau(2-\tau)}{\tau+58} \quad \text{or} \quad \frac{\tau(2-\tau)}{\tau-62}.$$

Putting $\tau = 0{\cdot}1$ as before, we find the error is in either case less than $0^s{\cdot}0033$.

A general view of the chronograph with one barrel removed is shown in the Plate, Fig. 1.

## Pivot Error.

Shortly after the charge of the Radcliffe Observatory came into my hands, I examined the eastern pivot of the Transit Circle with an apparatus procured by Stone for this purpose, and soon obtained evidence of the existence of appreciable errors. It thus became a matter of importance to determine the magnitude of these inequalities. The method used by Stone was suggested and described by M. Hamy of the Paris Observatory[1]. But, although exceedingly sensitive and beautifully adapted for

[1] *Bulletin Astronomique*, xii. p. 49.

detecting the existence of such errors, it does not give us the means of evaluating them; and it was, therefore, necessary to devise other means of attacking this problem.

The method finally adopted is a modification of Hamy's. It is fully described in a paper published in the *Monthly Notices* of the Royal Astronomical Society, Vol. lxv. p. 56, to which reference may be made for further details. The pivots are of steel, 3 inches in diameter, and perforated by holes 1·75 inches in diameter. A light plug of brass was inserted in the opening of each pivot, fitting tightly, but without strain in the aperture. In each plug was firmly fixed a very carefully turned pin of hardened steel of about 1 mm. diameter. A lever *L* (Fig. 2), movable about a horizontal axis *a* fixed to the pier of the telescope, carried near its other extremity a small bracket terminating in a knife-edge of hardened steel, which rested on the pin. This lever supported a small horizontal mirror *m* of black glass at a convenient distance from the fulcrum *a*. The mirror stood above and very close to the upper plane face of the lens *l* of a bent collimator provided with three levelling screws which rested on the pier. At the focus of the lens *l* was placed a small total-reflexion prism *d*, which was illuminated from the side with monochromatic light by means of a condensing lens. When this prism was adjusted so that light entered the collimator, interference fringes were produced in the lamina between the mirror *m* and the lens *l* as soon as their plane faces were brought into sensible parallelism. An eye placed at *E*, on looking at the lens *l* as reflected in the prism *D*, would then see these fringes at one side of the prism *d*.

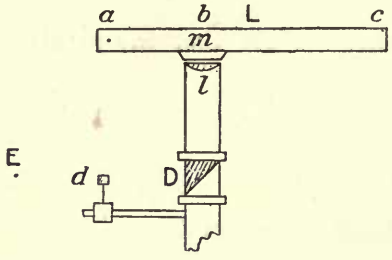

Fig. 2.

Any movement of the knife-edge in a vertical direction, due either to irregularities of the pivot or of the pin, or to an eccentric position of the pin, could thus be measured by the changes in the interference fringes as seen in the collimator when the telescope was rotated.

For determining the horizontal movements a further piece of apparatus had to be provided. For observing these a crank-lever, as shown in the Plate, Fig. 4, was pivoted on a fixed centre vertically above the pin. The arms of this lever were perpendicular to each other, and each carried a hardened steel straight-edge, of which one, the vertical, bore against the pin, whilst the other, the horizontal, supported the knife-edge and lever *L*. These two straight-edges were set accurately at right angles to each other, and so that, if produced, the straight lines which they determine would intersect at the centre on which the lever turns. They were also graduated so that the knife-edge of the lever *L* could be set at exactly the same distance from this centre as the pin. Any small horizontal displacement of the latter was thus converted into an equal vertical movement of the lever *L*, and could be observed in the same way as the vertical movements of the pin.

The arrangement of the apparatus as finally employed for measuring both the vertical and horizontal displacement is shown in the Plate, Figs. 3 and 4. For the purpose of these illustrations the instrument was mounted on a wooden frame carrying a wooden model of the pivot, as it was found impossible to photograph the apparatus *in situ*.

There are two possible sources of error against which it is necessary to guard in the use of this method. These are (1) errors in the figure of the pins themselves, and (2) a want of absolute accuracy in the parallelism or alignment of the two pins. Let us consider these two sources of error separately.

(1) *Errors in the figure of the pins.* As any deviation from the exactly circular form in that section of a pin on which the knife-edge bears will affect with its full force all observations made with it, the pins must be selected with all possible care. The figure of each pin must be critically examined before using it, and fortunately for this purpose, we have in an application of Monsieur Hamy's method a test which leaves nothing to be desired.

On the slide-rest of a small lathe was mounted a frame known as a 'watchmaker's turn'. One of the centres of this was of the ordinary form, consisting of a small drilled hole. The other was of brass in the form of a very small Y-bearing in which the pin turned (see *y*, Fig. 5). To the hand-rest of the lathe was firmly attached a brass block carrying the opposing screws which form the fulcrum *a* of the lever *L*, and the knife-edge attached to the lever was allowed to rest on the pin immediately above the Y-bearing.

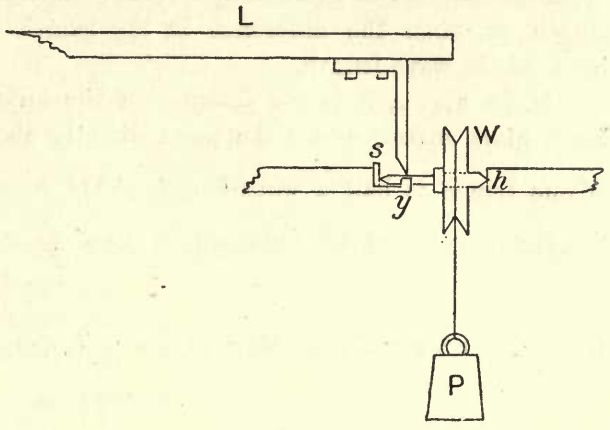

Fig. 5.

With this apparatus inequalities which did not exceed a small fraction of a wave-length of sodium light could be detected. From a number of pins two were selected in this way whose errors were practically negligible, and with these all the observations used in determining pivot errors were made.

(2) *Effect of an inclination of the pin to the axis of the telescope.* In the paper referred to above, the magnitude of the error which can arise from this cause is discussed, and it is there shown that if the pin is adjusted with any reasonable care to parallelism with the axis of the instrument the error is of quite negligible dimensions.

In the original paper the effect of the personality of the observer is considered and found to be practically zero, and an illustration is given of the remarkable agreement between the different series of observations, which it is unnecessary to reproduce here.

In deducing the errors of the pivots from measures of the vertical and horizontal displacements of the pin as the pivot is rotated, I have followed the method described in a memoir by Villarceau entitled 'Étude du mouvement de Rotation de la Lunette Méridienne,' published in the *Annales de l'Observatoire de Paris*, Mémoires, vii. p. 307.

The measured coordinates to any arbitrary origin of the centre of the pin attached to the eastern pivot being denoted by $\xi$ and $\eta$, and those of the western pin by $\xi'$ and $\eta'$ ($\xi$ and $\xi'$ being measured positively towards the south, $\eta$ and $\eta'$ positively towards the zenith), we take

$$x = \xi' - \xi \quad \text{and} \quad y = \eta' - \eta.$$

Then, the observations being made at $N$ different settings which divide exactly the circumference of the circle, we determine $p$ and $q$ from the equations

$$p = \frac{1}{N} \Sigma x \quad \text{and} \quad q = \frac{1}{N} \Sigma y.$$

If $\zeta$ denote the zenith distance of the point toward which the telescope is directed, which is measured positively towards the south and continuously through 360°, and if $R$ denote the length of the axis of the telescope between the measured points expressed in the same units as $\xi$, $\eta$, &c., we have $N$ equations of the form

$$P = \{(x-p)\sin\zeta + (y-q)\cos\zeta\}/R\sin 1''.$$

We have next to take the mean, $P_m$, of all the separate values of $P$. Thus

$$P_m = \frac{1}{N} \cdot \Sigma P;$$

and finally we have $N$ equations of the form

$$\delta c = P - P_m,$$

from which the separate values of $\delta c$ are deduced, i.e. the variable part of the collimation depending on pivot errors.

The observations being expressed in 'fringes', it is convenient to retain this unit throughout the computations, and to convert only the final results into angular measure. This is equivalent to neglecting the denominator, $R \sin 1''$, in the expression for $P$ and calculating $P$, $P_m$, and $\delta c$ in

terms of the same unit. To find the angular displacement of the axis corresponding to one of these units, we remark that one fringe takes the place of another when the distance between the upper surface of the collimator lens and the surface of the black glass mirror varies by half a wave-length, or when the difference in the lengths of the paths of the two interfering beams changes by a whole wave-length.

If, in Fig. 2, $a$ is the fulcrum of the lever, $b$ the point on it directly above the centre of the black glass mirror, and $c$ the point directly above the knife-edge, the movement of $b$ for a change of one fringe is half a wave-length ($\frac{1}{2}\lambda$); hence that of the knife-edge is $\frac{1}{2}\frac{ac}{ab}\cdot\lambda$, and therefore the factor required for reducing 'fringes' to seconds of arc is

$$\mu = \tfrac{1}{2}\frac{ac}{ab}\cdot\frac{\lambda}{R\sin 1''}.$$

From measures made on May 13, 1904, it was found that

$$R = 1382{\cdot}7^{\text{mm}};\quad ac = 381{\cdot}7^{\text{mm}};\quad \text{and}\quad ab = 128{\cdot}8^{\text{mm}}.$$

In these observations sodium light was employed. We may accordingly take $\lambda = 0{\cdot}0005893^{\text{mm}}$, and we find that

$$\mu = 0''{\cdot}1302.$$

With this factor the results of four different series of observations of $\delta c$ and the mean values corresponding to every fifth degree in the pointing of the telescope have been deduced as given in the following table.

## TABLE I.

### Pivot Errors of the Radcliffe Transit Circle.

| N.P.D. | I. | II. | III. | IV. | Mean. |
|---|---|---|---|---|---|
| ° | ″ | ″ | ″ | ″ | ″ |
| 0 | −0·23 | −0·16 | −0·05 | +0·24 | −0·049 |
| 5 | −0·29 | −0·06 | −0·13 | +0·25 | −0·058 |
| 10 | −0·20 | +0·03 | 0·00 | +0·29 | +0·029 |
| 15 | −0·12 | +0·06 | +0·04 | +0·31 | +0·073 |
| 20 | +0·03 | +0·12 | +0·19 | +0·29 | +0·156 |
| 25 | +0·38 | +0·40 | +0·61 | +0·66 | +0·513 |
| 30 | +0·66 | +0·70 | +0·95 | +0·88 | +0·796 |
| 35 | +0·41 | +0·31 | +0·60 | +0·47 | +0·447 |
| 40 | +0·13 | −0·05 | +0·25 | +0·06 | +0·097 |
| 45 | −0·08 | −0·31 | +0·07 | −0·26 | −0·143 |
| 50 | −0·05 | −0·44 | −0·15 | −0·48 | −0·281 |
| 55 | −0·09 | −0·61 | −0·35 | −0·69 | −0·435 |
| 60 | −0·27 | −0·75 | −0·45 | −0·92 | −0·596 |
| 65 | −0·26 | −0·71 | −0·43 | −0·99 | −0·598 |
| 70 | −0·32 | −0·72 | −0·40 | −1·05 | −0·622 |
| 75 | −0·26 | −0·64 | −0·42 | −0·95 | −0·567 |
| 80 | −0·14 | −0·38 | −0·25 | −0·94 | −0·429 |
| 85 | −0·14 | −0·35 | −0·16 | −0·75 | −0·351 |
| 90 | −0·19 | −0·21 | −0·17 | −0·76 | −0·333 |
| 95 | −0·29 | −0·23 | −0·19 | −0·69 | −0·349 |
| 100 | −0·14 | −0·06 | −0·01 | −0·59 | −0·200 |
| 105 | +0·05 | +0·23 | +0·18 | −0·31 | +0·037 |
| 110 | +0·19 | +0·43 | +0·16 | −0·02 | +0·190 |
| 115 | +0·48 | +0·70 | +0·49 | +0·45 | +0·530 |
| 120 | +0·57 | +1·00 | +0·69 | +0·69 | +0·738 |

## TABLE I (continued).

### Pivot Errors of the Radcliffe Transit Circle.

| N.P.D. | I. | II. | III. | IV. | Mean. |
|---|---|---|---|---|---|
| ° | ″ | ″ | ″ | ″ | ″ |
| 125 | +0·34 | +0·44 | +0·34 | +0·38 | +0·374 |
| 130 | −0·19 | +0·07 | −0·15 | −0·06 | −0·083 |
| 135 | −0·60 | −0·41 | −0·46 | −0·44 | −0·478 |
| 140 | −0·61 | −0·35 | −0·49 | −0·45 | −0·474 |
| 145 | −0·33 | −0·35 | −0·27 | −0·42 | −0·344 |
| 150 | −0·21 | −0·14 | −0·06 | −0·21 | −0·158 |
| 155 | +0·09 | +0·07 | +0·12 | +0·12 | +0·101 |
| 160 | +0·27 | +0·15 | +0·40 | +0·44 | +0·314 |
| 165 | +0·39 | +0·28 | +0·60 | +0·55 | +0·455 |
| 170 | +0·57 | +0·32 | +0·78 | +0·72 | +0·596 |
| 175 | +0·66 | +0·29 | +0·82 | +0·61 | +0·593 |
| 180 | +0·54 | +0·29 | +0·73 | +0·58 | +0·535 |
| 185 | +0·35 | +0·21 | +0·55 | +0·43 | +0·385 |
| 190 | +0·25 | +0·09 | +0·51 | +0·36 | +0·304 |
| 195 | +0·23 | +0·01 | +0·38 | +0·42 | +0·257 |
| 200 | +0·13 | −0·07 | +0·29 | +0·21 | +0·141 |
| 205 | +0·07 | −0·10 | +0·12 | +0·25 | +0·088 |
| 210 | +0·07 | −0·16 | +0·03 | +0·22 | +0·041 |
| 215 | −0·07 | −0·19 | −0·19 | +0·14 | −0·078 |
| 220 | −0·19 | −0·30 | −0·48 | −0·13 | −0·276 |
| 225 | −0·30 | −0·41 | −0·82 | −0·28 | −0·452 |
| 230 | −0·34 | −0·27 | −0·64 | −0·18 | −0·357 |
| 235 | −0·13 | −0·10 | −0·61 | +0·05 | −0·197 |
| 240 | −0·02 | +0·16 | −0·40 | +0·21 | −0·013 |
| 245 | +0·21 | +0·36 | −0·19 | +0·34 | +0·180 |
| 250 | +0·35 | +0·57 | −0·01 | +0·38 | +0·322 |
| 255 | +0·51 | +0·59 | +0·08 | +0·47 | +0·412 |
| 260 | +0·42 | +0·61 | +0·24 | +0·42 | +0·422 |
| 265 | +0·39 | +0·55 | +0·29 | +0·55 | +0·445 |
| 270 | +0·36 | +0·53 | +0·33 | +0·34 | +0·390 |
| 275 | +0·47 | +0·57 | +0·27 | +0·29 | +0·399 |
| 280 | +0·28 | +0·38 | +0·29 | +0·12 | +0·266 |
| 285 | +0·23 | +0·23 | +0·10 | +0·04 | +0·151 |
| 290 | +0·07 | +0·18 | −0·09 | −0·14 | +0·005 |
| 295 | −0·10 | +0·12 | −0·14 | −0·18 | −0·076 |
| 300 | −0·03 | +0·02 | −0·05 | −0·15 | −0·054 |
| 305 | −0·06 | +0·02 | −0·07 | −0·03 | −0·036 |
| 310 | −0·13 | −0·04 | −0·08 | −0·17 | −0·104 |
| 315 | −0·27 | −0·10 | −0·19 | −0·12 | −0·172 |
| 320 | −0·29 | −0·31 | −0·18 | −0·12 | −0·221 |
| 325 | −0·41 | −0·23 | −0·32 | −0·13 | −0·271 |
| 330 | −0·53 | −0·42 | −0·46 | −0·16 | −0·393 |
| 335 | −0·55 | −0·39 | −0·49 | −0·23 | −0·414 |
| 340 | −0·52 | −0·39 | −0·49 | −0·19 | −0·398 |
| 345 | −0·44 | −0·40 | −0·45 | −0·17 | −0·366 |
| 350 | −0·36 | −0·22 | −0·24 | −0·01 | −0·210 |
| 355 | −0·30 | −0·15 | −0·09 | +0·09 | −0·112 |
| 360 | −0·23 | −0·16 | −0·05 | +0·24 | −0·049 |

All the observations of R. A. contained in this volume have been corrected for these errors.

In the paper already quoted the mode of applying these corrections to observations which have been already published in the *Radcliffe Catalogue for* 1890 is discussed, and a table of corrections is given which is here reproduced for convenience.

## TABLE II.

CORRECTIONS FOR IRREGULARITIES OF THE PIVOTS OF THE RADCLIFFE TRANSIT CIRCLE.

| N.P.D. | Δα. | N.P.D. | Δα. | N.P.D. | Δα. | N.P.D. | Δα. |
|---|---|---|---|---|---|---|---|
| ° | s | ° | s | ° | s | ° | s |
| | | −5 | +0·057 | +10 | +0·062 | + 70 | −0·018 |
| −50 | +0·028 | 4 | ·049 | 15 | ·060 | 75 | ·013 |
| 45 | ·034 | 3 | ·036 | 20 | ·067 | 80 | −0·004 |
| 40 | ·041 | 2 | +0·015 | 25 | ·115 | 85 | +0·001 |
| 35 | ·048 | −1 | −0·030 | 30 | ·138 | 90 | ·002 |
| 30 | ·067 | 0 | | 35 | ·082 | 95 | ·001 |
| 25 | ·078 | +1 | +0·095 | 40 | ·040 | 100 | ·010 |
| 20 | ·088 | 2 | ·054 | 45 | ·015 | 105 | ·027 |
| 15 | ·099 | 3 | ·037 | 50 | +0·004 | 110 | ·036 |
| −10 | +0·076 | 4 | ·030 | 55 | −0·008 | 115 | ·062 |
| | | +5 | +0·031 | 60 | ·020 | 120 | ·079 |
| | | | | +65 | −0·018 | 125 | ·052 |
| | | | | | | +130 | +0·014 |

These are the corrections to be applied to all the right ascensions of the *Radcliffe Catalogue for* 1890 to free them from the effect of the irregularities of the pivots.

### DIVISION ERRORS OF THE CIRCLE.

In his Introduction to the *Radcliffe Observations* for 1880 Stone writes (p. vii)—

'No proper arrangements for the determination of the division-errors were made in the original construction of the instrument. Mr. Carrington neglected the division-errors altogether; but when the instrument was mounted at Oxford the position of two of the microscopes used by Mr. Carrington was found to be inconvenient when a gas flame was employed for illumination of the field of view, and four additional microscopes were therefore mounted at equal angular distances of 90°. The readings of all eight microscopes appear to have been compared with those obtained by the use of the four new microscopes, and the differences between the results considered as the division-errors under the four microscopes. These corrections were employed in the reduction of the published results from 1863 to 1879.

An examination of arcs of 45° showed that after these corrections were applied there were outstanding division-errors of a magnitude which could not be disregarded in the existing state of astronomical work; and I therefore made arrangements by which two of the supplementary microscopes could be shifted relatively to the four in general use: but it was not possible for me to arrange these additional microscopes altogether as I could have wished, and in the examination of the division-errors the errors of observation accumulate; but, in order to diminish the effect as much as possible, a large number of independent determinations were made, and it was only after the results showed a clear tendency to group around mean values that the corrections to the division-errors were accepted. The division corrections thus found when applied to the results have almost entirely destroyed, in mean results, the discordance between the Nadir-points determined from stars and with the Bohnenberger's eye-piece, and, although they are not yet determined with all the exactitude I could wish, the outstanding errors are certainly small.'

This is all the information we have as to Stone's method of treating this important question, and when the necessity arose of deciding whether his results should be adopted in the reduction of the circle readings for the present catalogue, it was found impossible to make out from his description exactly how the table of corrections, printed year after year in the volumes of *Radcliffe Observations*, had been deduced.

I was averse to adopting these corrections without a thorough examination, and our time being fully occupied with other branches of work I did not feel inclined to set them entirely aside and to undertake the investigation all over again if it could be avoided. The original observations had been preserved amongst the other records of the Observatory, and I was fortunate in retaining the services of two assistants, Messrs. Wickham and Robinson, who had made the observations under Stone's direction. Finding on examination that the observations, although not arranged in the most favourable way possible for the purpose, did actually afford the data for a rigorous determination of these errors, I decided to reduce them afresh, and thus, from the same material as Stone employed, to obtain an entirely independent determination.

Stone seems to have determined the errors of the 45° arcs, but the data from which he deduced them cannot now be found. His next step was to displace the opposite microscopes *A* and *C* through 1°, so as still to remain opposite to each other. With the microscopes in this position, nineteen distinct series of measures were made, each measure consisting of readings of the six microscopes, *a*, *b*, *c*, *d*, *A*, and *C*. The series were arranged as follows:—

| Series. | Date. | Lines under the Pointer Microscope. |
|---|---|---|
| 1. | 1881, Dec. 18. | Every degree from 0° to 90°, repeating 0° at the end of the series. |
| 2. | „ „ 19. | Every degree from 90° to 180°, repeating 90°. |
| 3. | „ „ 20. | Every degree from 180° to 270°, repeating 180°–187°, 230°–232°, and 188°–198°. |
| 4. | „ „ 21. | Every degree from 180° to 270°, repeating 180°, 224°, 226°, 237°, 238°, and 270° several times. |
| 5. | „ „ 22. | Every degree from 270° to 360°, repeating 270°, 314°, 316°, and 360° several times. |
| 6. | „ „ 28. | Every degree from 0° to 90°, repeating 0°, 44°, and 90° several times. |
| 7. | „ „ 29. | Every degree from 90° to 180°, repeating 90°, 126°, 134°, 135°, 136°, and 180° several times. |
| 8. | „ „ 30. | Every degree from 180° to 270°, repeating 180°, 224°, and 270° several times. |
| 9. | 1882, Jan. 1. | Every degree from 270° to 360°, repeating 270°, 314°, and 360° several times. |
| 10. | „ „ 4. | Every even degree from 0° to 180°, repeating 0°, 44°, 46°, 48°, 90°, 134°, 136°, and 180° several times. |
| 11. | „ „ 5. | Every even degree from 180° to 360°, repeating 180°, 224°, 226°, 270°, 314°, 316°, and 360° several times. |
| 12. | „ „ 9. | Every even degree from 180° to 90°, repeating 180°, 136°, 134°, 90°, 46°, 44°, and 0° several times. |
| 13. | „ „ 10. | Every even degree from 90° to 0°, repeating 90°, 46°, 44°, and 0° several times. |
| 14. | „ „ „ | Every even degree from 360° to 270°, repeating 360°, 316°, 314°, and 270° several times. |
| 15. | „ „ 11. | Every even degree from 270° to 180°, repeating 270°, 226°, 224°, 180°, and 0° several times. |
| 16. | „ „ „ | Every even degree from 180° to 90°, repeating 180°, 136°, 134°, and 90° several times. |
| 17. | „ „ 12. | Every even degree from 90° to 0°, repeating 90°, 46°, 44°, and 0° several times. |
| 18. | „ „ „ | Every even degree from 360° to 270°, repeating 360°, 316°, 314°, and 270° several times. |
| 19. | „ „ 13. | Every even degree from 270° to 180°, repeating 270°, 226°, 224°, and 180° several times. |

These nineteen series contain in all 10,612 readings of the circle, and as they had been made with great care it seemed inadvisable to set them aside.

The first step was to determine the errors of the lines 0°, 90°, 180°, and 270°. For this purpose special observations were made by Mr. Wickham, the readings of the four microscopes *a*, *b*, *c*, and *d*

being taken when each of these lines was brought in succession under microscope $a$. Five such series of measures were made, and from the mean of them we obtain four separate determinations of the error of each line. From the means of these we find

| Line | 0° | 90° | 180° | 270° |
|---|---|---|---|---|
| Error | 0″·00 | −1″·12 | −0″·33 | −2″·75. |

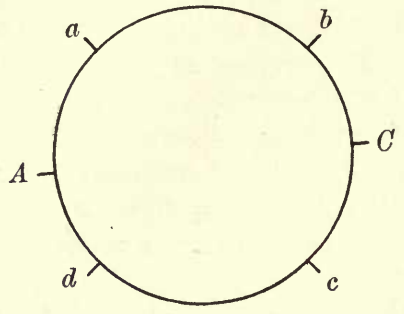

Fig. 6.

In the nineteen series of observations described above, the microscopes were arranged as indicated in the margin, $A$ and $C$ being displaced from their usual positions by 1°, so that the arcs $aA$ and $cC$ were each approximately 46° in length and the arcs $Ad$ and $Cb$ approximately 44° each.

When the pointer reading is 0°, then the 0° line is under $a$ and the 46° line under $A$; hence, if $A_0$ is the reading of microscope $A$ and $a_0$ that of microscope $a$, we have the distance between the lines 0° and 46° on the circle equal to the arc $Aa+A_0-a_0$. But it is also equal to $46°+e_{46}-e_0$, in which $e_0$ and $e_{46}$ are the errors of the lines 0° and 46°. Hence

$$\text{arc } Aa+A_0-a_0 = 46°+e_{46}-e_0.$$

Similarly

$$\text{arc } Cc+C_0-c_0 = 46°+e_{226}-e_{180}.$$

If we denote the mean of the arcs $Aa$ and $Cc$ by $M$, the mean of the readings at $A$ and $C$ by $R_0$, the mean of the readings at $a$ and $c$ by $r_0$, and the mean of the errors at opposite lines by capitals, thus, $E_{46}=\frac{1}{2}(e_{46}+e_{226})$, &c., then we have

$$M+R_0-r_0 = 46°+E_{46}-E_0.$$

Similarly

$$M+R_{46}-r_{46} = 46°+E_{92}-E_{46},$$
$$M+R_{92}-r_{92} = 46°+E_{138}-E_{92},$$
$$\cdot\quad\cdot\quad\cdot\quad\cdot\quad\cdot\quad\cdot$$
$$\cdot\quad\cdot\quad\cdot\quad\cdot\quad\cdot\quad\cdot$$
$$M+R_{178}-r_{178} = 46°+E_{224}-E_{178},$$

and

$$M+R_{224}-r_{224} = 46°+E_{270}-E_{224}.$$

If then we put

$$R=\tfrac{1}{45}(R_0+R_{46}+\ \ldots\ +R_{224}) \quad\text{and}\quad r=\tfrac{1}{45}(r_0+r_{46}+\ \ldots\ +r_{224}),$$

we have

$$M+R-r = 46°+(E_{270}-E_0)/45,$$

and taking differences we find

$$R_n-r_n-(R-r) = E_{n+46}-E_n-(E_{270}-E_0)/45,$$

where $n$ may be any of the numbers in the first column of Table III. From this expression the errors attaching to each of these forty-five lines may be found in succession.

Treating the observations made at the readings given in the second column in a similar manner, we find

$$R_n-r_n-(R-r) = E_{n+46}-E_n-(E_{180}-E_{270})/45,$$

from which the errors of the lines corresponding to the numbers in that series may be found.

Since $E_n$ is the mean of the errors attaching to the lines $n°$ and $180°+n°$, and since the numbers in the third and fourth columns differ by 180 from those in the first and second, it is clear that from these 180 sets of readings we obtain two independent determinations of the errors attaching to the mean of two opposite readings corresponding to every diameter passing through an even degree on the circle; and, as any flexure there may be will act in opposite directions in these two series, the mean of both determinations will be almost entirely free from this source of error.

If now the observations had been grouped in accordance with the numbers in these columns, that is to say, if the lines 0°, 46°, 92°, . . . 224°, 270° had been observed on one occasion, the lines 270°, 316°, 2°, . . . 134°, 180° on another and so on, a strong determination of the individual errors would have resulted. Unfortunately, however, this was not the case, but some of the lines

## TABLE III.

### Successive Numbers.

| For the 46° Arcs. | | | | For the 44° Arcs. | | | |
|---|---|---|---|---|---|---|---|
| 0° | 270° | 180° | 90° | 0° | 180° | 90° | 270° |
| 46 | 316 | 226 | 136 | 44 | 224 | 134 | 314 |
| 92 | 2 | 272 | 182 | 88 | 268 | 178 | 358 |
| 138 | 48 | 318 | 228 | 132 | 312 | 222 | 42 |
| 184 | 94 | 4 | 274 | 176 | 356 | 266 | 86 |
| 230 | 140 | 50 | 320 | 220 | 40 | 310 | 130 |
| 276 | 186 | 96 | 6 | 264 | 84 | 354 | 174 |
| 322 | 232 | 142 | 52 | 308 | 128 | 38 | 218 |
| 8 | 278 | 188 | 98 | 352 | 172 | 82 | 262 |
| 54 | 324 | 234 | 144 | 36 | 216 | 126 | 306 |
| 100 | 10 | 280 | 190 | 80 | 260 | 170 | 350 |
| 146 | 56 | 326 | 236 | 124 | 304 | 214 | 34 |
| 192 | 102 | 12 | 282 | 168 | 348 | 258 | 78 |
| 238 | 148 | 58 | 328 | 212 | 32 | 302 | 122 |
| 284 | 194 | 104 | 14 | 256 | 76 | 346 | 166 |
| 330 | 240 | 150 | 60 | 300 | 120 | 30 | 210 |
| 16 | 286 | 196 | 106 | 344 | 164 | 74 | 254 |
| 62 | 332 | 242 | 152 | 28 | 208 | 118 | 298 |
| 108 | 18 | 288 | 198 | 72 | 252 | 162 | 342 |
| 154 | 64 | 334 | 244 | 116 | 296 | 206 | 26 |
| 200 | 110 | 20 | 290 | 160 | 340 | 250 | 70 |
| 246 | 156 | 66 | 336 | 204 | 24 | 294 | 114 |
| 292 | 202 | 112 | 22 | 248 | 68 | 338 | 158 |
| 338 | 248 | 158 | 68 | 292 | 112 | 22 | 202 |
| 24 | 294 | 204 | 114 | 336 | 156 | 66 | 246 |
| 70 | 340 | 250 | 160 | 20 | 200 | 110 | 290 |
| 116 | 26 | 296 | 206 | 64 | 244 | 154 | 334 |
| 162 | 72 | 342 | 252 | 108 | 288 | 198 | 18 |
| 208 | 118 | 28 | 298 | 152 | 332 | 242 | 62 |
| 254 | 164 | 74 | 344 | 196 | 16 | 286 | 106 |
| 300 | 210 | 120 | 30 | 240 | 60 | 330 | 150 |
| 346 | 256 | 166 | 76 | 284 | 104 | 14 | 194 |
| 32 | 302 | 212 | 122 | 328 | 148 | 58 | 238 |
| 78 | 348 | 258 | 168 | 12 | 192 | 102 | 282 |
| 124 | 34 | 304 | 214 | 56 | 236 | 146 | 326 |
| 170 | 80 | 350 | 260 | 100 | 280 | 190 | 10 |
| 216 | 126 | 36 | 306 | 144 | 324 | 234 | 54 |
| 262 | 172 | 82 | 352 | 188 | 8 | 278 | 98 |
| 308 | 218 | 128 | 38 | 232 | 52 | 322 | 142 |
| 354 | 264 | 174 | 84 | 276 | 96 | 6 | 186 |
| 40 | 310 | 220 | 130 | 320 | 140 | 50 | 230 |
| 86 | 356 | 266 | 176 | 4 | 184 | 94 | 274 |
| 132 | 42 | 312 | 222 | 48 | 228 | 138 | 318 |
| 178 | 88 | 358 | 268 | 92 | 272 | 182 | 2 |
| 224 | 134 | 44 | 314 | 136 | 316 | 226 | 46 |

in a series were observed on one occasion, and some on another. I have, therefore, been obliged to take the mean reading for each line as deduced from the eighteen different series (rejecting

No. 3, which at the time was considered defective), and have had to assume that if any slight shift of the microscopes took place between one set of measures and another its effect will disappear in the mean of the differences.

As will be seen from the description given above of the different series of observations, special readings were several times repeated in each series to check the stability of the instrument, and this would have led to the detection of such a displacement had it occurred. The mode of mounting the microscopes in the pier and the general rigidity of the instrument would lead one to expect *a priori* that such effects would be very small indeed. The microscopes are, all six, mounted in the massive stone of which the western pier is composed, the eye-piece micrometers being inserted in solid brass castings which are bolted to the outer face of the pier, whilst the objectives are mounted in similar castings bolted to the inner face. No metal tubes connect the objectives and eye-pieces. There is thus very little reason to fear any serious relative shift such as would fail to disappear in the difference $R-r$. The close agreement of the different determinations points in the same direction, and seems to indicate that the effect of any such disturbance is practically eliminated from the final means.

A comparison of the readings of the microscopes *b* and *d* with those of *A* and *C* will also in an exactly similar way give two independent determinations of the errors of the lines corresponding to every even degree on the circle. The successive numbers for this arc are 0°, 44°, 88°, &c., as shown in columns 5, 6, 7, and 8 of Table III.

We thus obtain, in all, four independent values of the division errors.

Finally, since a complete circle reading always consists of the mean of the readings of the four microscopes *a*, *b*, *c*, and *d*, we must take the means of the errors, as found above, for the lines 0° and 90°, 1° and 91°, 2° and 92°, and so on. We thus obtain the following table of corrections. In the first column is given the pointer reading; in the second is the correction for division errors to the mean of the four microscopes as determined from the observations of the 46° arcs; in the third column are the corrections similarly deduced from the observations of the 44° arcs; the fourth column contains the mean of the quantities on the same line in the second and third columns; the fifth column gives the values of the same quantities deduced by Stone and published by him in the introduction to the *Radcliffe Observations* since 1881. The last column contains the differences between the corrections as now deduced and those originally found by Stone.

These differences, though evidently of a systematic character, are very small, in no case exceeding 0″·13. There is this to be considered, too, that Stone reduced the observations as they were taken, each day directing what lines should be observed. From the intimate knowledge he thus possessed of the work as it proceeded, and of the relative value of each day's results, he may have had reason for weighting some of the series more heavily than others. In this way he was, we know, influenced to reject the third series altogether on account of some unrecorded defect in the observations. In the present investigation, on the contrary, it has been necessary, in the absence of sufficient information, to give all observations equal weight, with the exception of the discarded series No. 3. For these reasons I decided to adopt Stone's corrections for the present catalogue without any alteration whatever, more particularly as they had been already employed in the reduction of the observations.

## TABLE IV.

CORRECTIONS TO THE MEAN OF THE FOUR MICROSCOPES *a*, *b*, *c*, AND *d* FOR THE DIVISION ERRORS OF THE CIRCLE.

| N.P.D. | From 46° Arc. | From 44° Arc. | Mean. | Stone. | Rambaut minus Stone. |
|---|---|---|---|---|---|
| ° | ″ | ″ | ″ | ″ | ″ |
| 0 | 0·00 | 0·00 | 0·00 | 0·00 | 0·00 |
| 2 | +0·19 | +0·07 | +0·13 | +0·11 | +0·02 |
| 4 | −0·12 | −0·19 | −0·15 | −0·22 | +0·07 |
| 6 | −0·07 | +0·02 | −0·02 | −0·08 | +0·06 |
| 8 | −0·49 | −0·20 | −0·34 | −0·41 | +0·07 |
| 10 | −0·29 | +0·01 | −0·14 | −0·20 | +0·06 |
| 12 | −0·27 | +0·21 | −0·03 | −0·10 | +0·07 |
| 14 | −0·52 | −0·07 | −0·29 | −0·23 | −0·06 |
| 16 | −0·25 | +0·25 | 0·00 | +0·07 | −0·07 |
| 18 | −0·04 | +0·33 | +0·14 | +0·22 | −0·08 |
| 20 | −0·27 | +0·15 | −0·06 | +0·04 | −0·10 |
| 22 | −0·24 | +0·30 | +0·03 | 0·00 | +0·03 |
| 24 | −0·23 | +0·05 | −0·09 | −0·02 | −0·07 |
| 26 | −0·42 | −0·08 | −0·25 | −0·13 | −0·12 |
| 28 | −0·36 | −0·10 | −0·23 | −0·11 | −0·12 |
| 30 | −0·15 | −0·03 | −0·09 | +0·03 | −0·12 |
| 32 | −0·37 | −0·16 | −0·26 | −0·14 | −0·12 |
| 34 | −0·35 | −0·23 | −0·29 | −0·17 | −0·12 |
| 36 | −0·63 | −0·42 | −0·52 | −0·41 | −0·11 |
| 38 | −0·69 | −0·35 | −0·52 | −0·40 | −0·12 |
| 40 | −0·28 | −0·16 | −0·22 | −0·10 | −0·12 |
| 42 | −0·16 | +0·02 | −0·07 | +0·06 | −0·13 |
| 44 | −0·03 | −0·13 | −0·08 | 0·00 | −0·08 |
| 46 | +0·20 | +0·11 | +0·15 | +0·15 | 0·00 |
| 48 | −0·12 | −0·09 | −0·10 | −0·11 | +0·01 |
| 50 | +0·26 | +0·36 | +0·31 | +0·26 | +0·05 |
| 52 | +0·23 | +0·43 | +0·33 | +0·27 | +0·06 |
| 54 | +0·13 | +0·56 | +0·34 | +0·29 | +0·05 |
| 56 | +0·57 | +0·89 | +0·73 | +0·67 | +0·06 |
| 58 | +0·93 | +1·26 | +1·09 | +1·05 | +0·04 |
| 60 | +0·80 | +1·40 | +1·10 | +1·17 | −0·07 |
| 62 | +0·58 | +0·96 | +0·77 | +0·84 | −0·07 |
| 64 | +0·42 | +0·68 | +0·55 | +0·65 | −0·10 |
| 66 | +0·14 | +0·38 | +0·26 | +0·36 | −0·10 |
| 68 | +0·16 | +0·31 | +0·24 | +0·33 | −0·09 |
| 70 | −0·41 | −0·19 | −0·30 | −0·18 | −0·12 |
| 72 | −0·60 | −0·33 | −0·46 | −0·34 | −0·12 |
| 74 | −0·74 | −0·56 | −0·65 | −0·53 | −0·12 |
| 76 | −0·73 | −0·54 | −0·63 | −0·51 | −0·12 |
| 78 | −0·66 | −0·39 | −0·52 | −0·41 | −0·11 |
| 80 | −0·35 | −0·11 | −0·23 | −0·12 | −0·11 |
| 82 | −0·64 | −0·33 | −0·48 | −0·37 | −0·11 |
| 84 | −0·41 | −0·26 | −0·33 | −0·21 | −0·12 |
| 86 | −0·03 | +0·16 | +0·06 | +0·19 | −0·13 |
| 88 | −0·22 | −0·20 | −0·21 | −0·08 | −0·13 |
| 90 | 0·00 | 0·00 | 0·00 | 0·00 | 0·00 |

## Mode of Observation and Reduction.

The method of taking and reducing the observations is in general similar to that employed in preparing the 1890 Catalogue, the only changes of importance being the introduction of the chronograph for registering transits, and of the recording micrometer for use in the zenith distance observations. Both of these changes have added considerably to the accuracy of the results. The personal equations of the three observers, which were carefully discussed from time to time during the progress of the work, have been found to remain remarkably constant. They are, perhaps, rather large, but, as each observer determines his own clock error, they enter only into the computation of the daily rate of the clock. Referred to the mean eye-and-ear habit of the three observers they have been found to be as follows in successive years:—

Personal Equations Applied in Determining the Rate of the Transit Clock, Dent 1317.

| | Eye and Ear. | | | Chronograph. | | |
|---|---|---|---|---|---|---|
| | W. | R. | C. | W. | R. | C. |
| | s. | s. | s. | s. | s. | s. |
| 1894 | +0·19 | −0·32 | +0·12 | | | |
| 1895 | +0·26 | −0·37 | +0·10 | | | |
| 1896 | +0·30 | −0·31 | +0·02 | | | |
| 1897 | +0·28 | −0·32 | +0·03 | | | |
| 1898 | +0·31 | −0·32 | −0·01 | | | |
| 1899 | +0·32 | −0·30 | −0·02 | +0·28 | +0·07 | +0·10 |
| 1899·5 | +0·28 | −0·28 | 0·00 | +0·27 | +0·12 | +0·15 |
| 1900 | +0·28 | −0·28 | 0·00 | +0·27 | +0·12 | +0·15 |
| 1901 | +0·28 | −0·28 | 0·00 | +0·27 | +0·12 | +0·15 |
| 1902 | +0·28 | −0·27 | 0·00 | +0·27 | +0·12 | +0·15 |
| 1902·3 | +0·28 | −0·27 | 0·00 | +0·27 | +0·09 | +0·13 |
| 1903 | +0·28 | −0·27 | −0·01 | +0·27 | +0·09 | +0·13 |

The sign + indicates that the observer to whom it applies makes the observed clock-time *greater* than the mean.

In the period embraced by the Catalogue there were altogether about 11,000 transits observed, about 8,250 by the eye-and-ear method, and 2,750 with the chronograph. About one quarter of these being transits of clock stars were not used in forming the Catalogue places, for the reason explained in the next paragraph. Of those retained, the proportion would be about 6,000 eye-and-ear, and 2,000 with the chronograph. The chronograph was first used on April 18, 1899, and has been employed almost exclusively since March 16, 1901.

The collimation error is determined by observations of the north and south collimators, the level by observations from a Nadir mercury trough with a Bohnenberger eye-piece, and the azimuth error by observations of one or more of the following azimuth stars, viz. *Polaris*, *Cephei* 51 (Hev.), *Groombridge* 1119, *Bradley* 1672, *Groombridge* 2283, *δ Ursae Minoris*, λ *Ursae Minoris*, and *Bradley* 3147. The observations of these stars have not been included in deducing their places for the Catalogue unless the azimuth error has been determined from at least two transits of circumpolar stars, one observed above and the other below the pole. The right ascensions of clock stars have not been retained unless the clock error has been deduced from at least four clock stars. All observations of right ascension have been corrected for the irregularities of the pivots given on pages xii and xiii of this Introduction. For the determination of the error of the clock, the places of the *Nautical Almanac* have been used with the corrections derived from the Greenwich Clock-Star Lists (which have each year been furnished to the Observatory by the courtesy of the Astronomer Royal) with the exception of the two stars *α Columbae* and *Fomalhaut*, which have not been employed for this purpose.

The observations of North Polar Distance have been reduced with the Nadir point as determined each night by means of a Bohnenberger's reflecting eye-piece. No correction for the $R-D$ discordance has been made to the direct observations, the whole difference being applied as a correction to the reflected observations to render them homogeneous with the direct. From a number of observations distributed over the period embraced by the Catalogue this correction was found to be represented by the expression

$$R-D = +0''\cdot295 - 0''\cdot184 \sin Z.D.$$

The second term rests on somewhat slender evidence and has accordingly been neglected, but the constant term has been applied to correct all reflexion observations. Another small correction required by reflexion observations is due to the difference between the latitude of the Transit Circle and that of the mercury trough. As the latter is always situated along a horizontal plane three feet below the axis of the telescope, it is easily seen that the correction to the zenith distance due to this cause is given by the expression

$$+0''\cdot06 \tan Z.D.$$

This correction, although so small, has, whenever sensible, been applied to reflexion observations.

The correction for flexure found by Stone, viz. :—

$$1''\cdot10 \sin Z.D.$$

continued to be applied until Nov. 19, 1899, when the old breech end was removed, the tube cut, and a new breech-piece applied. From a series of measures made in September, 1901, the horizontal flexure of the instrument in its altered condition was found to be $1''\cdot46$. This value was subsequently corroborated by a careful series of measures made in June, 1902, by four different observers after the complete isolation of the collimator piers. The individual results agreed closely *inter se* and gave as a mean the value $1''\cdot48$ for this constant. All observations made subsequently to Nov. 19, 1899, have accordingly been affected with a flexure correction of

$$1''\cdot5 \sin Z.D.$$

The horizontal wire in the eye-piece of the telescope is moved by a micrometer screw and the reading is impressed on a fillet of paper by means of a steel disk attached to the head on which the divisions are embossed. Several bisections of the star are made at convenient parts of the field before and after the transit of the middle wire, and recorded on the paper without requiring the observer to withdraw his eye from the eye-piece. A complete observation consists of four or five such settings and the readings of the circle at the four microscopes *a*, *b*, *c*, and *d*.

The N.P.D. screw has been examined from time to time during the progress of the work, but no injurious effect of wear could be detected. On several occasions a series of pairs of Nadir determinations were made at various readings of the telescope micrometer and of the circle, but there seemed to be no trace of any systematic difference depending on the part of the screw used. The observations of January 20, 1904 (see p. xxii), will serve as an illustration. This series was obtained shortly after the observations for the Catalogue had been finished and shows the state of the screw at that time.

Two sets of observations of the Nadir point were made at eleven different readings of the telescope micrometer from $14^r\cdot4$ to $24^r\cdot0$. In the first the observer stood on the north side of the instrument, and then a similar series was made in reverse order, the observer standing on the south side. In this way the mean of each pair of observations at the same micrometer reading corresponds to nearly the same instant of time and so any progressive change of a uniform character is eliminated. In observations 1 to 6 and 17 to 22 the division line 218° 15′ was read. In the other observations the setting was made on line 218° 10′.

The small discordances shown here between the individual means are well within the limits of accidental error in observations of this kind. In fact, as computed from these observations, the probable error of a determination of the Nadir point observed in a north and south position is found to be only $\pm0''\cdot07$. In Nadir observations the line 218° 15′ has been invariably used since 1880.

OBSERVATIONS OF NADIR, 1904 JANUARY 20.

| Order of taking Nadir. | Setting. | Tel. Mic. | Position of Observer. | Division line under Microscope. | Separate determinations of Zenith Point. | Resulting Zenith Point. (Mean of N. and S.) |
|---|---|---|---|---|---|---|
| | ° ′ ″ | r | | ° ′ | ° ′ ″ | ° ′ ″ |
| 1 | 218 17 39 | 14·4 | N. | 218 15 | 38 25 19·93 | 38 25 20·11 |
| 22 | 39 | 14·4 | S. | | 20·29 | |
| 2 | 17 2 | 15·6 | N. | 218 15 | 20·35 | 20·16 |
| 21 | 8 | 15·4 | S. | | 19·98 | |
| 3 | 16 34 | 16·5 | N. | 218 15 | 20·34 | 20·20 |
| 20 | 47 | 16·0 | S. | | 20·07 | |
| 4 | 16 15 | 17·1 | N. | 218 15 | 20·02 | 20·11 |
| 19 | 17 | 17·0 | S. | | 20·20 | |
| 5 | 15 45 | 18·0 | N. | 218 15 | 19·95 | 20·10 |
| 18 | 47 | 17·9 | S. | | 20·26 | |
| 6 | 15 11 | 19·0 | N. | 218 15 | 19·63 | 19·87 |
| 17 | 12 | 19·0 | S. | | 20·10 | |
| 7 | 14 42 | 20·0 | N. | 218 10 | 20·08 | 20·06 |
| 16 | 38 | 20·1 | S. | | 20·05 | |
| 8 | 14 11 | 20·9 | N. | 218 10 | 19·94 | 20·13 |
| 15 | 16 | 20·8 | S. | | 20·32 | |
| 9 | 13 41 | 21·9 | N. | 218 10 | 20·06 | 20·27 |
| 14 | 41 | 21·9 | S. | | 20·49 | |
| 10 | 13 5 | 23·0 | N. | 218 10 | 20·06 | 20·17 |
| 13 | 9 | 22·9 | S. | | 20·29 | |
| 11 | 12 34 | 24·0 | N. | 218 10 | 20·33 | 20·20 |
| 12 | 34 | 24·0 | S. | | 20·08 | |

The correction for run of each microscope is taken as the excess (or defect) over five minutes of arc of the differences between the readings corresponding to two adjacent traits on the circle. The mean correction for the four microscopes has been applied to every circle reading.

The division errors as determined by Stone in 1881 and 1882 have been applied to all readings of the circle (see p. xix). The inclination of the horizontal wire has been frequently determined and from many observations made at various parts of the wire it is shown that it is sensibly a straight line.

The refractions down to Z. D. 85° are those of Bessel's *Tabulae Regiomontanae*, computed by the aid of the Tables printed as an Appendix to the *Greenwich Observations for* 1853.

Below 85° zenith-distance, the mean refractions of the *Fundamenta*, multiplied by the factor 1·003282, have been substituted for those of the *Tabulae Regiomontanae* for the sake of continuity. In the calculations, the barometer-readings used are those of the standard by Newman, No. 1220, which hangs in the Transit-Circle room with its cistern at a height of 2½ feet above the floor, and the thermometer-readings are those of Hicks, No. 576, which is mounted on the north side

of the building, and is used as a standard thermometer for the reduction of the photographic meteorological records.

The star corrections have been computed by the aid of Stone's Tables (*Appendix to Cape Observations*, 1874) and Bessel's Day Numbers, except for stars whose apparent places are given in the *Nautical Almanac*. The corrections for these stars have been found by subtracting the apparent R.A., or Declination as the case might be, from the mean as given in that work.

### Proper Motion and Precession.

The proper motions adopted in the catalogue are for the most part those of Auwers' *Neue Reduction der Bradley'schen Beobachtungen*. The exceptions to this rule are pointed out in the notes at the foot of each page.

The proper motions given by Auwers in his *Verbesserungen der Eigenbewegungen*, published in the *Astronomische Nachrichten*, 3928-9, generally agree very closely with those of Auwers' *Bradley* for stars contained in the *Radcliffe Catalogue for* 1900; the few exceptions are indicated in the notes (e.g. Nos. 1020, 1358, 1491, &c.). The proper motion in N.P.D. of Auwers' *Bradley* for No. 1264 is only approximate, and that of Bossert has therefore been preferred. For close circumpolar stars the proper motions of Auwers' *Bradley* (reduced to 1900) have been used where possible. For No. 709 (Groomb. 1119), and No. 1178 (Groomb. 2283), the values found by Thackeray (*Monthly Notices of R. A. S.*, lviii, pp. 45-6) have been adopted. As the Struve-Peters constants of the precession have been used throughout, the above proper motions have been preferred to those of Newcomb, which are based on the new value of the precession obtained by him.

Proper motions taken from other sources than Auwers' *Bradley* have been checked by the recent Radcliffe observations before they were adopted for the Catalogue. The following works have been consulted for proper motions, and are referred to in the notes to the Catalogue:—

Auwers. 'Verbesserungen der Oerter des vorläufigen Fundamental-Catalogs.' . . . *Astronomische Nachrichten*, No. 3511.

Auwers. 'Tobias Mayer's Sternverzeichniss.' (Chiefly Zodiacal Stars. Auwers considers these proper motions of equal or nearly equal value to those of Auwers' *Bradley*.)

Auwers. 'Catalog der Astronomischen Gesellschaft, Berlin A, pp. 212-224, Verzeichniss der Eigenbewegungen.' (The corrections on pp. 360-362 have been applied.)

Auwers. 'Fundamental-Catalog für die Zonen-Beobachtungen, 1875·0; Astronomische Gesellschaft, xiv, xvii.'

Becker. 'Catalog der Astronomischen Gesellschaft, Berlin A, pp. 210-213; Verzeichniss der Eigenbewegungen.' (In a few instances the places of stars with marked discordances, given at pp. 221-223, have been discussed and the proper motions determined for the present Catalogue (*vide* Nos. 833, 1405, and 1448.)

Boss. 'Catalog der Astronomischen Gesellschaft, Albany. Notes to the Catalogue, Part I, pp. 222-231.' (In Part II of the Notes, Boss indicates possible proper motions for certain other stars. Some of these suspicions have been confirmed by the Radcliffe observations, and the values of the proper motions computed and adopted; e.g. Nos. 127, 260, &c.)

Bossert. 'Détermination des Mouvements Propres des Étoiles,' given in the Introductions to the four volumes of the 'Catalogue de l'Observatoire de Paris.'

Porter. 'Publications of the Cincinnati Observatory, No. 12. Catalogue of 1340 Proper Motion Stars.'

Porter. 'Publications of the Cincinnati Observatory, No. 14. Catalogue of 2030 Stars and Proper Motions of 971 Stars.'

Schroeter. 'Untersuchung über die Eigenbewegung von Sternen in der Zone 65°-70° nördlicher Declination. Publication des Universitäts-Observatoriums in Christiania.'

Stone. Proper motions specially computed for the 'Radcliffe Catalogue of 6424 Stars for 1890,' and adopted in that work.

In several cases, as indicated in the notes, the proper motions have been specially computed for the present work. For this purpose the following Catalogues have been utilized:—Lalande, 1800; Weisse's Bessel, 1825; Downing's Taylor, 1835; Rümker, 1836; Santini, 1840; Oeltzen's

Argelander, 1842; Paris, 1845; Weisse's Argelander (S), 1850; Frisby's Yarnall, 1860; Paris, 1860; Brussels, 1865; Schjellerup, 1865; Glasgow, 1870; Albany A. G., 1875; Bonn A. G., 1875; Berlin (B) A. G., 1875; Paris, 1875; Lamont, 1880; Cape, 1880; Radcliffe, 1890; Glasgow, 1890.

In comparing these catalogues Auwers' *Tafeln zur Reduction von Sterncatalogen auf das System des Fundamental-Catalogs des Berliner Jahrbuchs*, published as No. 7 of the *Ergänzungshefte zu den Astronomischen Nachrichten*, have been employed in order to render the material as homogeneous as possible. At the time this comparison was made, the corrections for pivot errors had not yet been applied to the recent Oxford observations of right ascensions. The corrections for systematic errors given in that work for the *Radcliffe Catalogue*, 1890 (which are to a great extent accounted for by the pivot corrections subsequently applied, see *Monthly Notices of R. A. S.*, vol. lxv, p. 79), have, therefore, in this part of the work, been assumed to be applicable to both the 1890 and 1900 Catalogues.

The reduction of the separate results to the epoch of the Catalogue has been made in the following manner:—For use in computing the precessions, preliminary places, as accurate as possible, for 1900·0 were first found for each star. These were taken,

(1) for Nautical Almanac Stars, from that work for 1900;

(2) for Zone Stars between 85° and 89° N.P.D., from Albany, A. G., adopting the precessions given in that Catalogue and applying proper motions, when sensible, from some of the sources mentioned above;

(3) for Zodiacal Stars, chiefly from recent Greenwich annual volumes;

(4) for Close Polar Stars, from recent Radcliffe observations, using the precessions given in Radcliffe, 1890, and Greenwich, 1890, allowing for the third term of the precession and proper motions whenever sensible;

(5) for miscellaneous stars, from some modern catalogue, e.g. Greenwich, 1880 or 1890, Paris, 1875, and various A. G. Catalogues; or, if the star's place could not be readily found, it was specially brought up from the recent Radcliffe observations.

With these places, the precessions and secular variations were then computed with the help of Folie's *Douze Tables pour le calcul des Réductions Stellaires*, employing the Struve-Peters constants. The precessions and secular variations thus found were then checked by comparing them with the values given in

(1) one of the A. G. Catalogues;

(2) Greenwich Catalogue, 1890;

(3) Greenwich volumes of recent years.

For stars not found in any of the above the computation was carefully examined throughout.

With the values of the precessions so deduced, and, in the cases of standard stars, including proper motion, each separate observation was reduced to 1900·0. The resulting places were then compared together, and if the agreement of the separate results *inter se* was not perfectly satisfactory, those values which stood out from the mean, together with those means which differed considerably from the preliminary places found as explained above, were marked, and all computations relating to them critically examined. In this way, it is hoped, the errors, from which we can scarcely expect to be entirely free, have been kept within as narrow limits as possible.

In all cases, the proper motions given in the Catalogue have been included in deducing the final places. If, therefore, at any time it should be desired to substitute other values of the proper motion for those here given, this can easily be accomplished by adding to the co-ordinates of the star, as found in the Catalogue, the product obtained by multiplying the difference between the given proper motion and that which is to be substituted for it by the interval in years between the mean date of observation of the star and the epoch of the Catalogue.

## Determination of the Equinox.

The right ascensions of the stars in this catalogue were in the first instance based on those of the Greenwich Clock Star Lists issued annually by the Royal Observatory. For the period covered by the catalogue, with the exception of the last year, these constitute a fairly homogeneous system, the mean difference of any two lists being very small, although more than one change was made in the sources from which the places were deduced. Thus for the years 1894–97 they were taken from the new *Five-Year Catalogue of* 258 *Fundamental Stars for* 1890. From 1898 to 1900 they are the mean R. A.s adopted for the *Ten-Year Catalogue for* 1890. In 1901 and 1902 they are deduced from the 'Standard Mean Right Ascensions of Clock Stars for 1890·0, based on Twelve-Hour Groups,' printed at the end of the *Introduction to the Second Ten-Year Catalogue for* 1890. In the Clock List for 1903, however, an abrupt change was introduced, the places being taken from the same list of standard right ascensions as in the two preceding years, but having a correction of $+0^s.054$ applied to them to refer them to the Equinox of Professor Newcomb's *Catalogue of Fundamental Stars for* 1900. As the observations for the present catalogue were then drawing to a close, and as it was obviously advisable to refer all the observations to the same equinox, this correction with its sign changed was applied to the places of the Greenwich Clock Star List for 1903 before the latter were used in reducing the Oxford observations.

Observations of the Sun were made at this Observatory during the years 1896–99, for the determination of the equinox and the position of the ecliptic. These observations were discussed in the manner described at pp. 101 and 102 of vol. xliv, and pp. 226 and 227 of vol. xlvii of the *Radcliffe Observations.*

The results for each separate year and the number of observations are as follows:

| | No. of Obs. | $d\alpha$ | $d\Delta$ | $d\omega$ |
|---|---|---|---|---|
| | | s | ″ | ″ |
| 1896 | 71 | +0·012 | +0·18 | +0·13 |
| 1897 | 29 | +0·178 | −0·33 | −0·08 |
| 1898 | 81 | −0·072 | +0·11 | +0·05 |
| 1899 | 81 | −0·069 | −0·19 | +0·96 |

In this table

$d\alpha$ denotes the mean correction required by the observed right ascensions,

$d\Delta$ „ „ „ „ „ „ „ N.P.D.s,

and $d\omega$ „ „ „ „ „ „ tabular obliquity,

as indicated by the observations of the Sun.

Taking the simple means we find

$$d\alpha = +0^s.012\,; \qquad d\Delta = -0''.06\,; \qquad d\omega = +0''.27.$$

The observations of the Sun in these years are somewhat unevenly distributed so that some of the values given above are of less weight than others. Assigning approximate weights to the individual results, determined by the number of observations and their distribution in the various seasons, we find

$$d\alpha = +0^s.009\,; \qquad d\Delta = -0''.03\,; \qquad d\omega = +0''.21.$$

The solar observations, for the years 1896–99, were reduced with the value of the colatitude adopted by Stone for the 1890 Catalogue, viz.

$$38^\circ\ 14'\ 24''.61$$

and no account was taken of the variation of this quantity in computing them. It was, therefore, necessary to ascertain how far they must be modified when allowance is made for this variation.

The corrections for the variation of latitude up to the end of the year 1899, were obtained by means of the values of $x$ and $y$ given in the *Astronomical Journal*, No. 522, p. 147, in the columns headed 'Comp.' After 1900·0 Albrecht's values published in the *Astronomische Nachrichten*, 3808, 3875, and 3945 were employed in the discussion of the colatitude.

When these corrections are applied to the observations of the Sun we find

$$d\alpha = -0^{s}\cdot010\,; \qquad d\Delta = -0''\cdot03\,; \qquad d\omega = +0''\cdot17.$$

It will thus be seen that whether the variation of latitude be taken into account or not the correction to the equinox ($d\alpha$) is practically insensible in observations of the Sun. This result, being obtained from the observations of only four years, is naturally affected by considerable uncertainty, and it has, accordingly, not been applied in deducing the final right ascension of stars. The equinox of the catalogue is therefore the same as that of the Greenwich 'Standard Mean Right Ascension of Clock Stars for 1890·0.'

*The Colatitude.*—The colatitude deduced from 246 observations of close circumpolar stars above and below the pole is

$$38^{\circ}\ 14'\ 24''\cdot41.$$

This value had been obtained and employed in reducing the places of a large number of stars before the correction for variation of latitude had been computed. The effect of the introduction of these corrections into the places of the close polars was to improve slightly the agreement of the N.P.D.s *inter se*, but the resulting mean correction to the deduced colatitude was practically *nil*, being only $-0''\cdot01$. The above value of the colatitude was therefore adopted without alteration.

As an example of the effect of the movement of the pole on the observations the following table is given which exhibits the probable error of an observation in N.P.D. of Polaris as computed with and without the corrections for variation of latitude.

PROBABLE ERROR IN N.P.D. OF POLARIS.

| | | Uncorrected. | Corrected. | No. of Obs. |
|---|---|---|---|---|
| | | ″ | ″ | |
| Polaris | 1897 | ±0·220 | ±0·256 | 8 |
| | 1898 | 0·679 | 0·594 | 4 |
| | 1899 | 0·281 | 0·258 | 4 |
| | 1903 | 0·179 | 0·110 | 7 |
| Polaris, S.P. | 1897 | 0·311 | 0·252 | 7 |
| | 1898 | ±0·200 | ±0·179 | 9 |

These groups of observations have been selected for the purpose of illustration as including a relatively large range of variation in latitude, i.e. not less than $0''\cdot20$.

ORBITAL MOTION OF SIRIUS AND PROCYON AND PARALLAX OF SIRIUS.

In recent years several alterations have been made in the method of deducing the apparent and mean places for the *Nautical Almanac* of the two stars Sirius and Procyon, Nos. 583 and 672 of this Catalogue. From 1896 to 1899 the apparent places of these stars have been corrected for the effect of their orbital motion since 1890·0, the corrections being deduced from Auwers' elements (*Astronomische Nachrichten*, Nos. 1371–3 and 3084–5). The mean places are those of the Greenwich *Five-Year or Ten-Year Catalogues for* 1890. In 1900 both mean and apparent places have been corrected for the orbital motion since 1890·0. In 1901 the mean places and proper motions of Professor Newcomb's *Catalogue of Fundamental Stars* having been adopted, the mean and apparent places of the *Nautical Almanac* were both corrected for the effect of orbital motion. And, finally, in 1902 a further change was made by the introduction of the correction for the effect of annual parallax in the case of Sirius.

In reducing the observations of these stars the corrections to mean place were in the first instance obtained, as in the case of the other *Nautical Almanac* stars, by subtracting the apparent from the mean co-ordinates as given in the *Nautical Almanac*, and adding the differences as corrections to the apparent place observed at Oxford. In deducing the final place for the Catalogue,

however, the changing corrections of the *Nautical Almanac* for orbital motion were entirely eliminated so as to obtain a mean result independent of them, and the mean so found was then reduced to the centre of gravity of the system by means of Auwers' values.

The places given in the Catalogue for these two objects refer therefore in each case to the centre of gravity of the system.

In the case of Sirius, the correction to the apparent place for the effect of annual parallax—which, adopting the value, 0″·37, as found by Gill, amounts in the mean to +0ˢ·024 in R.A. and to −0″·06 in N.P.D.—has been included in deducing the final place. This is the only star in the present volume for which it has been necessary to take the annual parallax into account in forming the Catalogue place. This star was observed on 1903 March 6 and 16.

## The Accuracy of the Results.

*Probable Errors.*—As the right ascensions of the present catalogue have been partly observed by the eye and ear method, and partly registered on the chronograph, it is a matter of some interest to compare the accuracy of the results obtained by the two methods. From observations made for this purpose shortly after the erection of the chronograph, in which the same transits were observed by the eye and ear method across six, and chronographically across ten, wires, we find:

Probable Error × sin N.P.D.

| Method. | Single Wire. | Mean of Wires. |
|---|---|---|
| | ˢ | ˢ |
| Eye and Ear | ±0·059 | ±0·024 |
| Chronograph | ±0·045 | ±0·014 |

On the average, transits of stars for the Catalogue were observed across seven wires by the eye and ear, and across ten wires by the chronographic, method. The probable errors of the means are therefore ±0ˢ·022 and ±0ˢ·014 respectively. It thus appears that the precision of the chronographic, relatively to that of the eye and ear, method as used at Oxford is in the ratio 11 : 7, a result which may be compared with the conclusion arrived at by Dunkin from a discussion of the Greenwich observations for 1853 and 1857 (*Monthly Notices*, xx, p. 87), the corresponding figures found by him being ±0ˢ·028 and ±0ˢ·017 deduced from transits across seven and nine wires respectively.

The probable error of a single determination of the clock correction is ±0ˢ·028, and as at least four stars have always been included in determining this quantity, the probable error arising from this cause is therefore not greater than ±0ˢ·014.

The probable error of a single determination of the right ascension of each of the close circumpolar stars used for azimuth, as computed from all the available material contained in the present catalogue, is exhibited in the following table:—

Probable Errors for Close Circumpolar Stars.

| | | Above Pole. | | Below Pole. | |
|---|---|---|---|---|---|
| | N.P.D. | P.E. × sin N.P.D. | No. of Obs. | P.E. × sin N.P.D. | No. of Obs. |
| | ° ′ | ˢ | | ˢ | |
| λ Ursae Min. | 1 0 | ±0·012 | 29 | ±0·007 | 12 |
| Groomb. 1119 | 1 4 | 0·009 | 10 | 0·014 | 17 |
| Polaris | 1 13 | 0·016 | 23 | 0·014 | 32 |
| Bradley 1672 | 1 46 | 0·016 | 5 | .... | .. |
| Groomb. 2283 | 2 23 | 0·009 | 5 | .... | .. |
| Cephei 51 (Hev.) | 2 48 | 0·010 | 13 | 0·013 | 30 |
| δ Ursae Min. | 3 23 | ±0·015 | 22 | ±0·010 | 13 |

While all these quantities are remarkably small there is one point which the table brings out clearly, viz. that, so far as the Oxford places are concerned, the observations of Polaris do not exhibit any greater accuracy than those of other close polar stars which are used in determining the azimuth error, as was found to be the case at Greenwich. (See Dr. Downing's paper on *Probable Errors of Greenwich Determinations of Right Ascension at Different Zenith Distances*, *Monthly Notices*, xlix, p. 359.)

Combining all the observations included in the above table we find

$$\pm 0^s\cdot 013 \times \text{cosec N.P.D.}$$

as the probable error of a single observation in right ascension of a close circumpolar star.

The probable error of the right ascensions given in the Catalogue for stars, other than close circumpolars, was computed in the usual way from 2,601 separate observations of 227 stars, each of which had been observed not less than five times, and was found to be for a single observation $\pm 0^s\cdot 028 \times$ cosec N.P.D. The final places are in general the means of three or more separate observations, and we have—

The P.E. of a Catalogue R.A. depending on three observations $= \pm 0^s\cdot 016 \times$ cosec N.P.D.

The probable error of an observation in N.P.D. as found from 234 observations of the seven close circumpolar stars given above is $\pm 0''\cdot 34$. For the other stars of the Catalogue, from 390 observations of 65 stars we find nearly the same figure, viz. $\pm 0''\cdot 32$. Hence

The P.E. of a Catalogue N.P.D. depending on three observations $= \pm 0''\cdot 18$.

The following table exhibits the probable errors of a single observation of R.A. and N.P.D. at various distances from the pole, and shows that in R.A. the precision of the observations is very nearly constant from the zenith down to 120° N.P.D. The smallness of the probable error corresponding to the zone 120°–122° is obviously an accident due to the small number of stars which it contains. As might be expected, too, the table shows a distinct falling off in accuracy in the observations of N.P.D. as the horizon is approached.

## TABLE V.

PROBABLE ERRORS FOR ZONES OF 10° IN N.P.D.

| Zone. | P.E. in R.A. × sin N.P.D. | No. of Obs. | No. of Stars. | P.E. in N.P.D. | No. of Obs. | No. of Stars. |
|---|---|---|---|---|---|---|
| ° ° | s | | | ″ | | |
| 10 — 20 | ... | ... | ... | ±0·33 | 22 | 4 |
| 30 — 40 | ±0·028 | 5 | 1 | 0·22 | 5 | 1 |
| 40 — 50 | 0·023 | 7 | 1 | 0·33 | 7 | 1 |
| 50 — 60 | 0·026 | 78 | 9 | 0·35 | 6 | 1 |
| 60 — 70 | 0·025 | 403 | 37 | 0·28 | 111 | 18 |
| 70 — 80 | 0·029 | 528 | 41 | 0·26 | 38 | 6 |
| 80 — 90 | 0·030 | 654 | 56 | 0·34 | 119 | 19 |
| 90—100 | 0·029 | 477 | 35 | 0·35 | 44 | 8 |
| 100—110 | 0·028 | 295 | 26 | 0·40 | 33 | 6 |
| 110—120 | 0·030 | 143 | 18 | ±0·61 | 5 | 1 |
| 120—122 | ±0·019 | 11 | 2 | ... | ... | ... |

*Systematic Differences.*—The places of the present catalogue have been compared with those of four other catalogues, viz. Professor Newcomb's *Catalogue of Fundamental Stars for* 1900, the *Radcliffe Catalogue for* 1890, the Greenwich *Second Ten-Year Catalogue for* 1890, and the *Albany A. G. Catalogue for* 1875.

In the following table the mean differences between the first of these and the *Radcliffe Catalogue*, 1900, in the sense Radcliffe 1900 *minus* Newcomb, are arranged according to N.P.D. in zones of 10° in width.

## TABLE VI.

COMPARISON BETWEEN THE RADCLIFFE 1900, AND NEWCOMB'S *Fundamental, Catalogues* ARRANGED IN ORDER OF N.P.D.

| N.P.D. | Δ R.A. | Δ R.A. × sin N.P.D. | Δ N.P.D. | No. of Stars. |
|---|---|---|---|---|
| ° ° | s | s | ″ | |
| 0 — 10 | +0·3 | +0·014 | −0·01 | 9 |
| 10 — 20 | −0·02 | −0·007 | −0·24 | 9 |
| 20 — 30 | −0·04 | −0·020 | −0·13 | 3 |
| 30 — 40 | −0·16 | −0·100 | −0·40 | 2 |
| 40 — 50 | −0·06 | −0·040 | −0·90 | 1 |
| 50 — 60 | −0·074 | −0·061 | −0·23 | 13 |
| 60 — 70 | −0·064 | −0·058 | −0·43 | 60 |
| 70 — 80 | −0·054 | −0·052 | −0·46 | 69 |
| 80 — 90 | −0·058 | −0·058 | −0·13 | 92 |
| 90—100 | −0·063 | −0·063 | −0·34 | 38 |
| 100—110 | −0·045 | −0·043 | −0·18 | 30 |
| 110—120 | −0·054 | −0·049 | −0·33 | 21 |
| 120—125 | −0·060 | −0·051 | +0·20 | 4 |
| Weighted Mean. | | s −0·052 | ″ −0·29 | |

Remarking that the differences in the zone 30°—50° N.P.D. depend upon only three stars, it will be seen that the differences in right ascension as reduced to the equator are practically constant from the zenith to within 7° or 8° of the south horizon, and almost exactly equal to the difference of the equinoxes (0ˢ·054) to which the places of this Catalogue and those of Professor Newcomb's are referred (see p. xxv).

In comparing this Catalogue with the *Radcliffe Catalogue*, 1890, and with the Greenwich *Second Ten-Year Catalogue*, 1890, the differences have been collected in zones of 5° in N.P.D. Weights have been assigned to each of the differences by the formula $nn'/(n+n')$, $n$ and $n'$ being the number of observations of a star in the two Catalogues. The weighted means so obtained and the corresponding weights are given in Table VII on page xxx.

In this comparison the right ascensions of the Radcliffe Catalogue, 1890, have been corrected for the inequalities of the pivots by the application of the quantities given in Table II, p. xiv. Here a progressive change in the differences of R.A. of the two Radcliffe catalogues dependent on N.P.D., similar to, but smaller than, that found by Stone* to exist between the Radcliffe Catalogue, 1890, and the Greenwich Catalogue, 1880, is clearly indicated. The comparison with Newcomb and with the Greenwich Catalogue, 1890, seems to show that no sensible systematic error of this kind is to be attributed to the Radcliffe places for 1900, from which it would appear that while the corrections for pivot error have considerably improved the right ascensions of the *Radcliffe Catalogue*, 1890, they have not completely removed this systematic inequality. The mean difference between the two catalogues comes out −0ˢ·016, or, if we take only stars south of 50° N.P.D. and exclude the zone 120°—125° N.P.D., in which the comparison stars are few, we find −0ˢ·018. In the zone 45°—50° N.P.D. there are no stars for comparison. The mean difference in right ascension between Radcliffe, 1900, and Greenwich, 1890, is only −0ˢ·002, while the results for the separate zones show no marked systematic change.

* See *Monthly Notices of R.A.S.*, Vol. lv, No. 5.

## TABLE VII.

COMPARISON BETWEEN THE RADCLIFFE 1900, RADCLIFFE 1890, AND GREENWICH 1890, CATALOGUES.

| Group. | Mean N.P.D. of Group. | Differences in R.A. × sin N.P.D. | | | | Differences in N.P.D. | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Rad. 1900 *minus* Rad. 1890. | Wt. | Rad. 1900 *minus* Gr. 1890. | Wt. | Rad. 1900 *minus* Rad. 1890. | Wt. | Rad. 1900 *minus* Gr. 1890. | Wt. |
| ° ° | ° ′ | s | | s | | ″ | | ″ | |
| 0 — 5 | 2 0 | +0·006 | 160 | +0·001 | 205 | −0·11 | 169 | −0·06 | 228 |
| 5 — 10 | 8 0 | +0·015 | 2 | +0·007 | 3 | −0·30 | 4 | +0·30 | 5 |
| 10 — 15 | 13 0 | +0·032 | 4 | −0·011 | 5 | −0·47 | 9 | +0·10 | 12 |
| 15 — 20 | 17 30 | +0·034 | 10 | +0·021 | 16 | −0·30 | 23 | −0·20 | 41 |
| 20 — 25 | 22 0 | +0·058 | 6 | +0·023 | 7 | −0·18 | 11 | +0·08 | 12 |
| 25 — 30 | 27 0 | −0·038 | 4 | +0·019 | 7 | +0·30 | 6 | −0·21 | 8 |
| 30 — 38¼ | 37 0 | −0·047 | 2 | −0·042 | 5 | +0·40 | 2 | −0·24 | 5 |
| 38¼ — 45 | 39 30 | −0·075 | 6 | −0·042 | 8 | −0·40 | 6 | −0·60 | 8 |
| 45 — 50 | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 50 — 55 | 52 30 | −0·069 | 18 | −0·034 | 35 | +0·20 | 12 | −0·37 | 27 |
| 55 — 60 | 58 0 | −0·031 | 30 | −0·003 | 54 | +0·58 | 20 | −0·21 | 33 |
| 60 — 65 | 62 30 | −0·038 | 121 | −0·012 | 265 | +0·24 | 70 | −0·59 | 202 |
| 65 — 70 | 67 30 | −0·033 | 161 | −0·009 | 365 | +0·25 | 92 | −0·62 | 288 |
| 70 — 75 | 72 30 | −0·039 | 195 | +0·002 | 417 | +0·16 | 95 | −0·71 | 297 |
| 75 — 80 | 77 30 | −0·030 | 205 | −0·002 | 310 | +0·24 | 82 | −0·65 | 178 |
| 80 — 85 | 82 30 | −0·032 | 254 | −0·001 | 346 | +0·50 | 86 | −0·49 | 176 |
| 85 — 90 | 87 30 | −0·020 | 295 | −0·003 | 412 | +0·10 | 171 | −0·44 | 296 |
| 90 — 95 | 92 0 | −0·020 | 199 | +0·006 | 181 | +0·11 | 86 | −0·76 | 76 |
| 95 —100 | 97 30 | +0·001 | 212 | −0·005 | 215 | +0·21 | 68 | −0·60 | 78 |
| 100 —105 | 102 30 | +0·017 | 93 | +0·003 | 91 | +0·02 | 30 | −0·56 | 34 |
| 105 —110 | 107 30 | +0·012 | 137 | +0·021 | 143 | +0·30 | 48 | −0·60 | 62 |
| 110 —115 | 112 30 | +0·029 | 77 | +0·011 | 68 | +0·30 | 43 | −0·70 | 38 |
| 115 —120 | 117 30 | +0·022 | 59 | −0·024 | 91 | −0·33 | 39 | −0·91 | 73 |
| 120 —125 | 122 0 | +0·031 | 13 | −0·028 | 10 | +0·25 | 12 | −0·02 | 9 |
| Weighted Means and Sums. | ° ° 0—125 | s −0·016 | 2263 | s −0·002 | 3259 | ... | ... | ... | ... |
| Weighted Means and Sums. | ° ° 50—120 | s −0·018 | 2056 | s −0·003 | 2993 | ″ +0·20 | 942 | ″ −0·60 | 1858 |

In N.P.D. the agreement between the two Radcliffe Catalogues is good, the mean difference for the range 50° to 120° N.P.D. being 0″·20. On the other hand, the comparison with Greenwich, 1890, shows a distinct systematic change depending on N.P.D. very similar to that found by Stone to exist between the Radcliffe, 1890, and the Greenwich, 1880, N.P.D.s. If the corrections given on p. 26 of the Introduction to the Greenwich Catalogue, 1890, to reduce to the Poulkova refractions and colatitude 38° 31′ 21″·75, are applied to the Greenwich N.P.D.s, these differences are very much diminished, but the variation dependent on N.P.D. does not entirely disappear. In this connexion it should be remembered that the Greenwich N.P.D.s have had a correction applied for the R—D discordance, which has practically the effect of rendering them the mean of the results obtained by direct and reflected observations. On the other hand, the Radcliffe places are deduced from the direct observations without any correction of this sort whatever, the whole of the R—D discordance being thrown on the reflected results. As already pointed out, the Oxford observations afford very little evidence for a term varying with sin Z.D. in the expression for R—D, and a constant, amounting to 0″·30, has been found to represent closely the differences between the

direct and reflected observations. Without entering into any discussion as to whether the mode of dealing with this discordance adopted at Greenwich is justified or not, it is interesting to remark that if the correction for the R—D discordance had not been applied to the Greenwich results, a comparison of the observations at Greenwich and Oxford would have shown no trace of this systematic difference. The effect of the correction for the R—D discordance at Greenwich cannot be entirely eliminated without going into the computations in detail, as the adopted zenith point of the Greenwich circle depends essentially on direct and reflected observations of stars, but as stars are observed for this purpose both north and south of the zenith, the mean effect of the discordance on the places of the Greenwich Catalogue introduced in this way must be small. If we take the values of this correction as given for the years 1887 to 1896 inclusive (see Greenwich *Second Ten-Year Catalogue*, 1890, Introduction, p. 20), we find that, as a mean value representing the whole period, the variable part of this correction is given by the expression

$$+0''{\cdot}58 \sin \text{Z.D.}$$

The value of this term at the mean N.P.D. of the various groups is given in the second column of the following Table. In the third column are given the differences Radcliffe 1900 *minus* Greenwich 1890. Adding these two together we get the quantities in the fourth column, which represent very closely the differences between the direct observations at Oxford and Greenwich. The mean of these is $-0''{\cdot}22$. The differences from this mean as given in the last column no longer show a sensible variation.

## TABLE VIII.

DIFFERENCES OF N.P.D. RADCLIFFE 1900 *minus* GREENWICH 1890 (DIRECT).

| Group. | 0·58 sin Z.D. | Rad. 1900 *minus* Gr. 1890. | Rad. Direct *minus* Gr. Direct. | Difference from Mean. |
|---|---|---|---|---|
| ° ° | ″ | ″ | ″ | ″ |
| 0 — 5 | −0·36 | −0·06 | −0·42 | −0·20 |
| 5 — 10 | −0·29 | +0·30 | +0·01 | +0·23 |
| 10 — 15 | −0·25 | +0·10 | −0·15 | +0·07 |
| 15 — 20 | −0·21 | −0·20 | −0·41 | −0·19 |
| 20 — 25 | −0·16 | +0·08 | −0·08 | +0·14 |
| 25 — 30 | −0·11 | −0·21 | −0·32 | −0·10 |
| 30 — 38¼ | −0·01 | −0·24 | −0·25 | −0·03 |
| 38¼ — 45 | +0·01 | −0·60 | −0·59 | −0·37 |
| 45 — 50 | ... | ... | ... | ... |
| 50 — 55 | +0·14 | −0·37 | −0·23 | −0·01 |
| 55 — 60 | +0·20 | −0·21 | −0·01 | +0·21 |
| 60 — 65 | +0·24 | −0·59 | −0·35 | −0·13 |
| 65 — 70 | +0·28 | −0·62 | −0·34 | −0·12 |
| 70 — 75 | +0·33 | −0·71 | −0·38 | −0·16 |
| 75 — 80 | +0·37 | −0·65 | −0·28 | −0·06 |
| 80 — 85 | +0·40 | −0·49 | −0·09 | +0·13 |
| 85 — 90 | +0·44 | −0·44 | 0·00 | +0·22 |
| 90 — 95 | +0·47 | −0·76 | −0·29 | −0·07 |
| 95 —100 | +0·50 | −0·60 | −0·10 | +0·12 |
| 100 —105 | +0·52 | −0·56 | −0·04 | +0·18 |
| 105 —110 | +0·54 | −0·60 | −0·06 | +0·16 |
| 110 —115 | +0·56 | −0·70 | −0·14 | +0·08 |
| 115 —120 | +0·57 | −0·91 | −0·34 | −0·12 |

The differences for the zones 50° – 120° N.P.D.—outside these limits either there are no stars common to the pairs of catalogues or they are too few to afford a reliable comparison—have been collected in Six-Hour groups, as given in the following Tables, Nos. IX and X. In each of these groups the same tendencies will be noticed as have already been shown to exist in the general table (Table VII), but there is very little, if any, indication of a systematic change from group to group depending on right ascension.

## TABLE IX.

COMPARISON BETWEEN THE RADCLIFFE CATALOGUES, 1900 AND 1890; FOR SIX-HOUR GROUPS.

*Differences of R.A. (Rad. 1900 minus Rad. 1890) × Sin N.P.D.*

| N.P.D. of Group. | $0^h$ to $6^h$ | | $6^h$ to $12^h$ | | $12^h$ to $18^h$ | | $18^h$ to $24^h$ | |
|---|---|---|---|---|---|---|---|---|
| | Diff. | Wt. | Diff. | Wt. | Diff. | Wt. | Diff. | Wt. |
| ° ° | s | | s | | s | | s | |
| 50 – 55 | – 0·071 | 9 | ... | ... | ... | ... | – 0·066 | 9 |
| 55 – 60 | – 0·076 | 2 | – 0·029 | 9 | – 0·031 | 15 | – 0·008 | 4 |
| 60 – 65 | – 0·028 | 21 | – 0·054 | 27 | – 0·036 | 48 | – 0·031 | 25 |
| 65 – 70 | – 0·035 | 68 | – 0·035 | 81 | + 0·037 | 2 | – 0·032 | 10 |
| 70 – 75 | – 0 034 | 59 | – 0·037 | 58 | – 0·044 | 67 | – 0·047 | 11 |
| 75 – 80 | – 0·012 | 38 | – 0·044 | 73 | – 0·039 | 41 | – 0·017 | 53 |
| 80 – 85 | – 0·017 | 75 | – 0·032 | 89 | – 0·055 | 40 | – 0·038 | 50 |
| 85 – 90 | – 0·015 | 55 | – 0·028 | 59 | – 0·034 | 95 | – 0·002 | 86 |
| 90 – 95 | – 0·014 | 49 | – 0·027 | 22 | – 0·038 | 64 | – 0·002 | 64 |
| 95-100 | + 0·011 | 66 | – 0·010 | 20 | – 0·007 | 63 | + 0·001 | 63 |
| 100-105 | + 0·035 | 16 | + 0·002 | 16 | + 0·011 | 43 | + 0·029 | 18 |
| 105-110 | + 0·005 | 11 | + 0·022 | 19 | + 0·006 | 68 | + 0·021 | 39 |
| 110-115 | + 0·058 | 19 | + 0·005 | 24 | + 0·008 | 25 | + 0·087 | 9 |
| 115-120 | ... | ... | + 0·067 | 17 | – 0·004 | 14 | + 0·008 | 28 |
| Weighted Means. | s – 0·013 | | s – 0·026 | | s – 0·024 | | s – 0·006 | |
| *Differences of N.P.D. (Rad. 1900 minus Rad. 1890).* | | | | | | | | |
| ° ° | ″ | | ″ | | ″ | | ″ | |
| 50 – 55 | + 0·52 | 5 | ... | ... | ... | ... | – 0·03 | 7 |
| 55 – 60 | – 0·20 | 3 | + 0·70 | 6 | + 0·30 | 7 | + 1·50 | 4 |
| 60 – 65 | + 0·29 | 19 | + 0·46 | 11 | + 0·19 | 20 | + 0·16 | 20 |
| 65 – 70 | + 0·31 | 44 | + 0·26 | 40 | + 0·60 | 2 | – 0·30 | 6 |
| 70 – 75 | + 0·31 | 41 | – 0·03 | 25 | + 0·21 | 22 | – 0·21 | 7 |
| 75 – 80 | + 0·29 | 26 | + 0·42 | 28 | – 0·13 | 11 | + 0·09 | 17 |
| 80 – 85 | + 0·23 | 28 | + 0·76 | 30 | + 0·63 | 10 | + 0·44 | 18 |
| 85 – 90 | – 0·11 | 36 | + 0·25 | 35 | + 0·18 | 41 | + 0·09 | 59 |
| 90 – 95 | + 0·07 | 19 | + 0·02 | 18 | + 0·03 | 34 | + 0·41 | 15 |
| 95-100 | + 0·18 | 24 | + 0·70 | 4 | – 0·06 | 21 | + 0·43 | 19 |
| 100-105 | + 0·10 | 6 | + 0·13 | 7 | + 0·09 | 12 | – 0·38 | 5 |
| 105-110 | + 0·20 | 4 | + 0·16 | 7 | + 0·21 | 20 | + 0·50 | 17 |
| 110-115 | + 0·78 | 12 | – 0·66 | 10 | + 0·31 | 13 | + 0·77 | 8 |
| 115-120 | ... | ... | – 0·35 | 16 | – 0·32 | 10 | – 0·31 | 13 |
| Weighted Means. | ″ + 0·23 | | ″ + 0·23 | | ″ + 0·13 | | ″ + 0·20 | |

## TABLE X.

COMPARISON BETWEEN THE RADCLIFFE CATALOGUE, 1900, AND GREENWICH CATALOGUE, 1890; FOR SIX-HOUR GROUPS.

*Differences of R.A. (Rad. 1900 minus Gr. 1890) × Sin N.P.D.*

| N.P.D. of Group. | $0^h$ to $6^h$ | | $6^h$ to $12^h$ | | $12^h$ to $18^h$ | | $18^h$ to $24^h$ | |
|---|---|---|---|---|---|---|---|---|
| | Diff. | Wt. | Diff. | Wt. | Diff. | Wt. | Diff. | Wt. |
| ° ° | s | | s | | s | | s | |
| 50 – 55 | – 0·034 | 14 | ... | ... | + 0·016 | 4 | – 0·046 | 17 |
| 55 – 60 | – 0·051 | 3 | – 0·020 | 14 | + 0·009 | 25 | + 0·002 | 12 |
| 60 – 65 | – 0·008 | 68 | – 0·019 | 86 | – 0·010 | 70 | – 0·011 | 41 |
| 65 – 70 | – 0·010 | 174 | – 0·009 | 169 | + 0·037 | 3 | – 0·006 | 19 |
| 70 – 75 | + 0·008 | 169 | + 0·003 | 145 | – 0·010 | 88 | – 0·015 | 15 |
| 75 – 80 | + 0·011 | 65 | – 0·010 | 120 | – 0·015 | 53 | + 0·008 | 72 |
| 80 – 85 | + 0·002 | 105 | + 0·005 | 118 | – 0·011 | 62 | – 0·008 | 61 |
| 85 – 90 | – 0·012 | 94 | + 0·004 | 95 | – 0·012 | 133 | + 0·012 | 90 |
| 90 – 95 | – 0·001 | 47 | + 0·002 | 11 | + 0·003 | 55 | + 0·014 | 68 |
| 95–100 | – 0·001 | 62 | – 0·020 | 20 | + 0·003 | 66 | – 0·010 | 67 |
| 100–105 | – 0·008 | 18 | – 0·011 | 13 | + 0·001 | 43 | + 0·028 | 17 |
| 105–110 | + 0·024 | 12 | + 0·031 | 18 | + 0·018 | 72 | + 0·023 | 41 |
| 110–115 | + 0·019 | 13 | + 0·017 | 19 | + 0·006 | 27 | + 0·001 | 9 |
| 115–120 | ... | ... | + 0·017 | 10 | – 0·049 | 26 | – 0·020 | 55 |
| Weighted Means. | s – 0·002 | | s – 0·003 | | s – 0·005 | | s 0·000 | |
| *Differences of N.P.D. (Rad. 1900 minus Gr. 1890).* | | | | | | | | |
| ° ° | ″ | | ″ | | ″ | | ″ | |
| 50 – 55 | – 0·20 | 11 | ... | ... | – 0·90 | 4 | – 0·34 | 12 |
| 55 – 60 | – 0·50 | 4 | – 0·14 | 8 | – 0·70 | 9 | + 0·22 | 12 |
| 60 – 65 | – 0·47 | 69 | – 0·68 | 65 | – 0·76 | 32 | – 0·53 | 36 |
| 65 – 70 | – 0·62 | 145 | – 0·68 | 118 | + 0·10 | 6 | – 0·47 | 19 |
| 70 – 75 | – 0·71 | 160 | – 0·72 | 98 | – 0·64 | 28 | – 0·76 | 11 |
| 75 – 80 | – 0·50 | 55 | – 0·70 | 73 | – 0·70 | 16 | – 0·78 | 34 |
| 80 – 85 | – 0·54 | 60 | – 0·35 | 62 | – 0·69 | 27 | – 0·49 | 27 |
| 85 – 90 | – 0·44 | 78 | – 0·26 | 72 | – 0·52 | 86 | – 0·53 | 60 |
| 90 – 95 | – 0·77 | 22 | – 0·52 | 8 | – 0·82 | 27 | – 0·75 | 19 |
| 95–100 | – 0·59 | 28 | – 0·30 | 5 | – 0·68 | 23 | – 0·58 | 22 |
| 100–105 | – 0·10 | 8 | – 0·56 | 5 | – 0·59 | 14 | – 1·00 | 7 |
| 105–110 | – 0·66 | 5 | – 0·30 | 9 | – 0·62 | 24 | – 0·69 | 24 |
| 110–115 | – 0·66 | 7 | – 1·25 | 8 | – 1·06 | 14 | + 0·32 | 9 |
| 115–120 | ... | ... | – 0·88 | 9 | – 0·96 | 22 | – 0·89 | 42 |
| Weighted Means. | ″ – 0·58 | | ″ – 0·59 | | ″ – 0·67 | | ″ – 0·58 | |

In comparing the places of the Radcliffe Catalogue, 1900, with those of the Albany (A.G.) Catalogue, 1875, the values of the precession and secular variation given in the Albany Catalogue (which also depend on Struve's constants) were used for bringing up the Albany places to 1900·0. The proper motions of the present Catalogue were adopted, except in the case of No. 162 (Albany 720), for which no proper motion is given in this work. The Radcliffe place for 1900,

however, confirms the proper motion as given in the Albany Catalogue, viz. $+0^{s}.013$ in R.A. and $+0''.11$ in N.P.D., and these values have accordingly been used in bringing up the Albany place.

## TABLE XI.

COMPARISON BETWEEN THE RADCLIFFE CATALOGUE, 1900, AND ALBANY (A.G.) CATALOGUE, 1875.

RADCLIFFE *minus* ALBANY.

| | Mean Diffs. of R.A. | Mean Diffs. of N.P.D. | Number of Stars. |
|---|---|---|---|
| Constant. | s<br>−0.069 | ″<br>−0.32 | |
| h h | s | ″ | |
| 0-1 | +0.011 | −0.03 | 24 |
| 1-2 | +0.015 | +0.02 | 33 |
| 2-3 | +0.043 | −0.04 | 31 |
| 3-4 | +0.015 | −0.08 | 28 |
| 4-5 | +0.028 | −0.24 | 28 |
| 5-6 | −0.009 | −0.14 | 52 |
| 0-6 | +0.014 | −0.09 | 196 |
| 6-7 | −0.019 | −0.07 | 50 |
| 7-8 | −0.028 | +0.28 | 39 |
| 8-9 | −0.045 | +0.13 | 30 |
| 9-10 | −0.046 | −0.09 | 31 |
| 10-11 | −0.025 | −0.15 | 28 |
| 11-12 | −0.015 | +0.35 | 28 |
| 6-12 | −0.029 | +0.07 | 206 |
| 12-13 | −0.024 | −0.16 | 23 |
| 13-14 | −0.047 | −0.04 | 29 |
| 14-15 | −0.040 | +0.07 | 28 |
| 15-16 | −0.008 | +0.19 | 35 |
| 16-17 | +0.006 | +0.02 | 29 |
| 17-18 | −0.012 | +0.01 | 51 |
| 12-18 | −0.019 | +0.03 | 195 |
| 18-19 | +0.016 | −0.09 | 54 |
| 19-20 | +0.030 | −0.03 | 40 |
| 20-21 | +0.037 | −0.04 | 39 |
| 21-22 | +0.047 | 0.00 | 33 |
| 22-23 | +0.027 | +0.07 | 36 |
| 23-24 | +0.033 | +0.16 | 31 |
| 18-24 | +0.030 | 0.00 | 233 |

There are 830 stars common to the Radcliffe and Albany Catalogues distributed in right ascension, as shown in Table XI. As these stars are all included in the zone 85° to 89° N.P.D.—or, to be more exact, between 84° 50′ and 89° 10′ of N.P.D. for the epoch 1855—it has not been necessary to separate them according to N.P.D. The mean differences of the two catalogues are $-0^s.069$ in R.A. and $-0''.32$ in N.P.D., as given at the head of the Table, and the differences from these means corresponding to each hour of R.A., and to each Six-Hour group, are exhibited in the columns of the Table.

In N.P.D. there is very little evidence of a systematic change in these residuals, unless it be one of eight hours period and about $0''.15$ amplitude, which is faintly indicated. But in R.A. we see a clearly marked variation with a period of 24 hours. In his paper, entitled *Ergebnisse aus Vergleichungen der Zonencataloge der Astronomischen Gesellschaft unter einander und mit dem Romberg'schen Catalog für* 1875, which appeared in the *Astronomische Nachrichten*, Nos. 3842-3-4, Professor Auwers publishes a comparison between the Albany places and those of Romberg's Poulkova Catalogue, 1875. The ordinates of the curve found by Professor Auwers to represent the differences, Albany *minus* Romberg, will, if their signs are changed, be found to exhibit a striking similarity to the values given in Table XI for the differences, Radcliffe *minus* Albany. It thus appears that the right ascensions of the Radcliffe Catalogue, 1900, agree very closely with those of Romberg's Poulkova Catalogue, which was selected by Professor Auwers, in the paper referred to, for comparison with the various A.G. Zones as being a catalogue 'von anerkannt grosser Genauigkeit.'

### Constellations.

As in the *Radcliffe Catalogue for* 1890, the nomenclature and constellations adopted by Francis Baily in the British Association Catalogue have been generally followed.

### Magnitude.

In all cases where the magnitudes given in the Catalogue depend upon observations made at this Observatory the number of estimations on which the magnitude is based follows in the next column. In other cases, the given magnitudes have been extracted from published lists. All the unmarked magnitudes have been taken from the Harvard publications, chiefly from the Harvard Photometric Durchmusterung (*Annals*, Vol. XLV), with a few exceptions, which have been taken from the Harvard Photometry (*Annals*, Vol. XIV). Those marked with an asterisk are from the Bonner Durchmusterung; those with a dagger from Struve's Double Stars (*Dun Echt Observatory Publications*, Vol. I); and those with a double dagger (Nos. 955 and 956 only) from the Argentine General Catalogue, 1875.

The information with regard to the limits of magnitude and the periods of variable stars, given in the footnotes on the left-hand pages of the Catalogue, are, with the exception of that relating to No. 1052, taken from Chandler's 'Third Catalogue of Variable Stars' (*Astronomical Journal*, No. 379), or his 'Revision of Elements of Third Catalogue of Variable Stars' (*Astronomical Journal*, No. 553). The elements for No. 1052 are Pickering's, and are taken from the *Astronomische Nachrichten*, No. 3347. The remarks on colour, magnitude, and position contained in these footnotes are extracted from the observers' original note-books. The footnotes on the right-hand pages refer to the authority for the proper motion adopted.

### Miscellaneous.

The observations on which the places of this catalogue are founded were made by Messrs. Walter Wickham, F.R.A.S., William Henry Robinson, and Ernest Edgar McClellan. All three are skilled observers, with long experience in this class of work. To this fact is largely due the precision of the results. In the table of Personal Equations given on p. xx they are denoted by the letters W, R, and C respectively.

Mr. Wickham's duties as First Assistant are of a varied kind, and, where work of an unexpected character or out of the ordinary routine of observations was required, I have generally had recourse to his services. There have been many interruptions of this kind in recent years, and, in particular, the work in connexion with the erection and preliminary trials of the new equatorial telescope has made serious inroads upon his time. He has nevertheless taken an active share in the transit circle observations. The ordinary adjustments of the transit circle have been entirely in his charge. He has rendered valuable assistance in examining and checking the computations, and in reading the proof sheets.

The labour of reducing the observations and preparing the catalogue has fallen principally upon Mr. Robinson, Second Assistant, and to this he has devoted himself with indefatigable assiduity and persevering skill. In some parts of the work he has had the assistance, first, of Mr. W. Jenkins, who filled the post of computer at this Observatory from October 1892 till April 1903, and later, of one or both of the computers—Messrs. J. G. Balk and R. Harris—who succeeded Mr. Jenkins. In addition to the ordinary routine of the observations, Mr. Robinson has executed a large number of miscellaneous computations arising out of the work.

Mr. McClellan, Third Assistant, has general charge of the meteorological department. He is also our principal photographer, in which capacity his duties absorb more and more of his time, as the photographic work with the new equatorial develops. He has taken his share of the active work at the telescope, but the photographic work and the daily routine of meteorological reductions have prevented his giving much assistance in the astronomical computations.

The present work owes its existence to the liberality of the Radcliffe Trustees. In the year 1772, in response to a request made to them by the University Authorities, the Radcliffe Trustees of that day founded and equipped the Observatory, and their successors have ever since maintained it at a high level of efficiency. The principal results of the astronomical labours carried on here since 1840 (not to mention the meteorological records, which constitute a large proportion of the total output of the Observatory) are contained in a series of forty-eight volumes of *Radcliffe Observations,* giving an account of the work done here from year to year and, in a more collected form, in four General Catalogues of Stars, viz. those of 1845, 1860, 1890, and the present work.

The observations made before 1840 have never been completely reduced nor published. They are, however, far from inconsiderable. In the form of neat MS. records they are now carefully preserved—to the number of at least 130,000 transits and 60,000 zenith distances—amongst the archives of the Observatory. In the *Monthly Notices of the R.A.S.*, Vol. lx, p. 265, will be found a paper under the title *Note on the Unpublished Observations made at the Radcliffe Observatory, Oxford, between the years* 1774 *and* 1838; *with some Results for the year* 1774, from which, though it has been very much curtailed by the exigencies of space, some idea may be formed of the value of these old observations. There is also a paper bearing on the subject, by the late Mr. Stone, in the *Monthly Notices*, Vol. lv, p. 409, entitled *A Determination of the Mean N.P.D.* 1790 *January* 0 *of* $\gamma$ *Draconis from Observations made at Oxford by Dr. Hornsby.* With the exception of a short note in *The Observatory* magazine for 1901, p. 453, entitled *Dr. Downing's Revision of Taylor's Madras Catalogue and the policy of Reducing Old Observations*, and four letters in the same magazine for 1902, pp. 90, 127, 165, and 166, these two papers contain, so far as I know, all the information on the subject at present published.

ARTHUR A. RAMBAUT.

*Radcliffe Observatory, Oxford.*
*February* 24, 1906.

# GENERAL CATALOGUE OF STARS

FOR

## 1900·0,

## FROM OBSERVATIONS

MADE AT THE

## RADCLIFFE OBSERVATORY, OXFORD,

## 1894 TO 1903.

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A. A. RAMBAUT.

| No. | Constellation. | Magnitude. | Number of Estimations. | Mean Year and Fraction of Year. | Number of Observations. | Mean R.A. | Precess. | Sec. Var. | Proper Motion. | No. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | h. m. s. | s. | s. | s. | |
| 1 | Piscium ... ... ... | 6·9 | 1 | 97·19 | 3 | 0 0 14·92 | +3·0728 | +0·0035 | | 1 |
| 2 | 21 Andromedae ... *a* | 2·3 | ... | 97·31 | 8 | 0 3 12·96 | +3·0829 | +0·0184 | +0·0095 | 2 |
| 3 | Piscium ... ... ... | 7·5 | 2 | 02·80 | 3 | 0 3 44·79 | +3·0728 | +0·0022 | | 3 |
| 4 | Piscium ... ... ... | 8·0 | 1 | 02·86 | 3 | 0 4 47·19 | +3·0748 | +0·0044 | | 4 |
| 5 | Piscium ... ... ... | 7·6 | 1 | 02·92 | 3 | 0 5 33·26 | +3·0736 | +0·0030 | | 5 |
| 6 | 88 Pegasi ... ... *γ* | 2·8 | ... | 97·93 | 13 | 0 8 5·10 | +3·0850 | +0·0102 | −0·0007 | 6 |
| 7 | Piscium ... ... ... | 6·8 | ... | 98·17 | 3 | 0 8 40·22 | +3·0735 | +0·0028 | | 7 |
| 8 | Piscium ... ... ... | 7·1 | ... | 98·84 | 3 | 0 9 28·88 | +3·0734 | +0·0028 | | 8 |
| 9 | 35 Piscium ... ... ... | 5·8 | ... | 97·94 | 3 | 0 9 49·69 | +3·0811 | +0·0068 | +0·0054 | 9 |
| 10 | Piscium ... ... ... | 7·5 | 2 | 02·81 | 3 | 0 10 30·23 | +3·0784 | +0·0053 | | 10 |
| 11 | Piscium ... ... ... | 7·0 | ... | 02·86 | 3 | 0 10 49·25 | +3·0768 | +0·0044 | | 11 |
| 12 | 36 Piscium ... ... ... | 6·2 | ... | 97·86 | 3 | 0 11 25·69 | +3·0817 | +0·0066 | −0·0036 | 12 |
| 13 | Piscium ... ... ... | 7·3 | ... | 98·84 | 3 | 0 11 31·72 | +3·0742 | +0·0032 | +0·0001 | 13 |
| 14 | Piscium ... ... ... | 6·3 | ... | 97·47 | 3 | 0 12 39·47 | +3·0742 | +0·0032 | +0·0047 | 14 |
| 15 | Ceti ... ... ... ... | 7·3 | 1 | 02·92 | 3 | 0 12 56·18 | +3·0728 | +0·0027 | | 15 |
| 16 | Piscium ... ... ... | 7·5 | 1 | 02·87 | 3 | 0 13 0·13 | +3·0770 | +0·0043 | | 16 |
| 17 | 8 Ceti ... ... ... *ι* | 3·7 | ... | 98·35 | 9 | 0 14 19·92 | +3·0589 | −0·0022 | −0·0032 | 17 |
| 18 | 41 Piscium ... ... *d* | 5·4 | ... | 97·88 | 3 | 0 15 27·05 | +3·0848 | +0·0068 | −0·0013 | 18 |
| 19 | 44 Piscium ... ... ... | 6·1 | ... | 98·52 | 9 | 0 20 16·50 | +3·0756 | +0·0038 | −0·0028 | 19 |
| 20 | Piscium ... ... ... | 6·9 | ... | 97·26 | 3 | 0 21 8·20 | +3·0798 | +0·0048 | | 20 |
| 21 | Piscium ... ... ... | 6·3 | 1 | 97·54 | 3 | 0 23 9·78 | +3·0956 | +0·0083 | +0·0040 | 21 |
| 22 | 12 Ceti ... ... ... ... | 6·0 | ... | 97·82 | 12 | 0 24 56·07 | +3·0613 | +0·0010 | −0·0003 | 22 |
| 23 | Piscium ... ... ... | 7·3 | 1 | 97·20 | 3 | 0 25 0·15 | +3·0837 | +0·0056 | | 23 |
| 24 | 51 Piscium ... ... ... | 6·7 | 1 | 97·90 | 3 | 0 27 14·13 | +3·0905 | +0·0068 | +0·0008 | 24 |
| 25 | Piscium ... ... ... | 8·1* | ... | 98·76 | 3 | 0 28 58·97 | +3·0887 | +0·0064 | | 25 |
| 26 | Ceti ... ... ... ... | 8·3* | ... | 02·80 | 3 | 0 29 16·37 | +3·0741 | +0·0038 | | 26 |
| 27 | Piscium ... ... ... | 6·7 | 1 | 97·50 | 3 | 0 32 21·47 | +3·0812 | +0·0050 | +0·0048 | 27 |
| 28 | 30 Andromedae ... *ε* | 4·5 | 1 | 98·43 | 8 | 0 33 16·13 | +3·1789 | +0·0211 | −0·0184 | 28 |
| 29 | Ceti ... ... ... ... | 8·2* | ... | 02·87 | 3 | 0 33 40·64 | +3·0741 | +0·0040 | | 29 |
| 30 | Piscium ... ... ... | 7·9 | 1 | 02·86 | 3 | 0 33 59·62 | +3·0816 | +0·0051 | +0·0482 | 30 |
| 31 | Piscium ... ... ... | 7·7 | 1 | 97·52 | 3 | 0 34 38·03 | +3·0836 | +0·0054 | | 31 |
| 32 | Piscium ... ... ... | 8·3 | 1 | 02·53 | 3 | 0 37 14·05 | +3·0864 | +0·0059 | | 32 |
| 33 | 16 Ceti ... ... ... *β* | 2·3 | ... | 97·73 | 10 | 0 38 34·19 | +2·9976 | −0·0053 | +0·0147 | 33 |
| 34 | Ceti ... ... ... ... | 8·2* | ... | 02·87 | 3 | 0 39 57·18 | +3·0778 | +0·0048 | −0·0010 | 34 |
| 35 | Ceti ... ... ... ... | 7·8* | ... | 02·83 | 3 | 0 40 46·38 | +3·0729 | +0·0042 | | 35 |
| 36 | 58 Piscium ... ... ... | 5·7 | 1 | 97·56 | 3 | 0 41 48·36 | +3·1217 | +0·0103 | +0·0017 | 36 |
| 37 | Piscium ... ... ... | 9·0 | 1 | 95·83 | 3 | 0 43 1·98 | +3·0985 | +0·0074 | | 37 |
| 38 | 62 Piscium ... ... ... | 6·0 | 1 | 97·91 | 3 | 0 43 5·97 | +3·1023 | +0·0078 | +0·0050 | 38 |
| 39 | Piscium ... ... ... | 5·0 | 1 | 97·95 | 3 | 0 43 8·21 | +3·0936 | +0·0068 | +0·0508 | 39 |
| 40 | 63 Piscium ... ... *δ* | 4·5 | ... | 98·10 | 10 | 0 43 29·56 | +3·1039 | +0·0080 | +0·0035 | 40 |
| 41 | Piscium ... ... ... | 8·0* | ... | 98·16 | 3 | 0 44 29·72 | +3·0992 | +0·0074 | | 41 |
| 42 | Piscium ... ... ... | 8·7* | ... | 99·86 | 4 | 0 45 1·03 | +3·1010 | +0·0076 | | 42 |
| 43 | Ceti ... ... ... ... | 7·7 | ... | 98·78 | 3 | 0 45 55·90 | +3·0830 | +0·0056 | | 43 |
| 44 | Piscium ... ... ... | 6·5 | ... | 97·26 | 3 | 0 46 9·25 | +3·0860 | +0·0059 | 0·0000 | 44 |
| 45 | Piscium ... ... ... | 9·0 | 1 | 97·84 | 3 | 0 47 30·00 | +3·1022 | +0·0077 | | 45 |

9. Double; brighter observed. Companion follows about $0^s·5$ and is south.

| No. | Mean Year and Fraction of Year. | Number of Observations. | Mean N.P.D. | Precess. | Sec. Var. | Proper Motion. | Auwers' Bradley, 1755. | Lalande, 1800. | Weisse's Bessel (1), 1825. | Albany (A. G.), 1875. | Radcliffe, 1890. | Greenwich, 1890. | B.D. | No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ° ′ ″ | ″ | ″ | ″ | | | | | | | ° | |
| 1 | 97·19 | 3 | 86 57 3·0 | −20·052 | +0·009 | | | 47229 | | 8243 | | | +2 4752 | 1 |
| 2 | 02·42 | 13 | 61 27 41·9 | −20·050 | +0·015 | +0·156 | 3215 | 47319 | | | 10 | 15 | +28 4 | 2 |
| 3 | 02·80 | 3 | 89 51 50·4 | −20·049 | +0·016 | | | 47342 | 1267 | | 14 | | −0 6 | 3 |
| 4 | 02·86 | 3 | 85 43 26·6 | −20·048 | +0·018 | | | 47373 | 22 | 17 | | | +4 8 | 4 |
| 5 | 02·92 | 3 | 88 30 4·1 | −20·046 | +0·019 | | | 16 | 45 | 21 | | | +1 12 | 5 |
| 6 | 01·60 | 7 | 75 22 20·7 | −20·040 | +0·024 | +0·013 | 1 | 107 | 92 | | 30 | 52 | +14 14 | 6 |
| 7 | 98·17 | 3 | 89 10 19·8 | −20·038 | +0·026 | | | 134 | 99 | | | | +0 19 | 7 |
| 8 | 98·84 | 3 | 89 15 32·0 | −20·035 | +0·027 | | | 163 | | | | | +0 22 | 8 |
| 9 | 97·94 | 3 | 81 44 3·5 | −20·034 | +0·028 | +0·021 | 5 | 182 | 119 | | | | +8 19 | 9 |
| 10 | 02·81 | 3 | 84 42 43·4 | −20·031 | +0·029 | | | | 129 | 34 | | | +5 25 | 10 |
| 11 | 02·86 | 3 | 86 18 14·9 | −20·030 | +0·030 | | | 205 | | 36 | | | +3 26 | 11 |
| 12 | 97·86 | 3 | 82 18 54·2 | −20·027 | +0·031 | +0·009 | 7 | 218 | 143 | | | 68 | +7 27 | 12 |
| 13 | 98·84 | 3 | 88 42 20·2 | −20·027 | +0·031 | +0·004 | | 225 | 148 | 38 | | | +1 28 | 13 |
| 14 | 97·47 | 3 | 88 52 1·8 | −20·022 | +0·033 | −0·021 | | 260 | | 45 | 49 | 75 | +0 28 | 14 |
| 15 | 02·92 | 3 | 89 56 19·3 | −20·020 | +0·034 | | | 310 | | | 52 | | −0 37 | 15 |
| 16 | 02·87 | 3 | 86 45 31·8 | −20·020 | +0·034 | | | 279 | 179 | 47 | | | +2 32 | 16 |
| 17 | 95·85 | 4 | 99 22 41·8 | −20·013 | +0·036 | +0·032 | 14 | 322 | | | 58 | 82 | −9 48 | 17 |
| 18 | 97·88 | 3 | 82 21 54·7 | −20·007 | +0·039 | −0·019 | 16 | 366 | 223 | | | 92 | +7 36 | 18 |
| 19 | 97·63 | 4 | 88 36 50·5 | −19·973 | +0·048 | +0·011 | 25 | 512 | 298 | 75 | 76 | 113 | +1 57 | 19 |
| 20 | 97·26 | 3 | 86 43 41·6 | −19·967 | +0·050 | | | 546 | 312 | 79 | | | +3 46 | 20 |
| 21 | 97·54 | 3 | 80 21 28·4 | −19·950 | +0·054 | +0·200 | | 617 | 340 | | | 121 | +9 47 | 21 |
| 22 | 97·72 | 5 | 94 30 35·2 | −19·933 | +0·057 | +0·009 | 38 | 669 | 371 | | 95 | 129 | −4 54 | 22 |
| 23 | 97·20 | 3 | 85 41 35·0 | −19·983 | +0·058 | | | 670 | 372 | 88 | | | +4 63 | 23 |
| 24 | 97·90 | 3 | 83 35 48·6 | −19·911 | +0·062 | −0·022 | 44 | 763 | 414 | | | 148 | +6 64 | 24 |
| 25 | 98·76 | 3 | 84 35 39·7 | −19·892 | +0·065 | | | 828 | 450 | 110 | | | +5 69 | 25 |
| 26 | 02·80 | 3 | 89 32 55·4 | −19·889 | +0·066 | | | | 457 | | | | +0 77 | 26 |
| 27 | 97·50 | 3 | 87 24 48·2 | −19·853 | +0·072 | +0·064 | | 954 | 507 | 128 | | | +2 80 | 27 |
| 28 | 03·18 | 15 | 61 13 52·1 | −19·841 | +0·076 | +0·251 | 56 | 976 | | | 122 | 194 | +28 103 | 28 |
| 29 | 02·87 | 3 | 89 36 5·9 | −19·836 | +0·074 | | | | 527 | | | | +0 96 | 29 |
| 30 | 02·86 | 3 | 87 25 26·7 | −19·832 | +0·075 | −0·277 | | 999 | 530 | 142 | | | +2 84 | 30 |
| 31 | 97·52 | 3 | 86 53 52·0 | −19·824 | +0·076 | | | 1027 | 544 | 144 | | | +2 86 | 31 |
| 32 | 02·53 | 3 | 86 22 50·6 | −19·788 | +0·081 | | | 1118 | | 164 | | | +3 93 | 32 |
| 33 | 00·62 | 3 | 108 32 7·6 | −19·769 | +0·082 | −0·034 | 70 | 1155 | | | 140 | 227 | −18 115 | 33 |
| 34 | 02·87 | 3 | 88 44 44·4 | −19·748 | +0·086 | +0·630 | | 1198 | 649 | 182 | | | +1 131 | 34 |
| 35 | 02·83 | 3 | 89 58 4·4 | −19·736 | +0·088 | | | 1225 | 662 | | | | −0 110 | 35 |
| 36 | 97·56 | 3 | 78 34 17·7 | −19·720 | +0·091 | +0·013 | 76 | 1254 | 681 | | | 245 | +11 96 | 36 |
| 37 | 95·83 | 3 | 84 6 37·4 | −19·700 | +0·093 | | | | | | | | +5 107 | 37 |
| 38 | 97·91 | 3 | 83 14 45·2 | −19·699 | +0·093 | −0·004 | 84 | 1300 | 708 | | | 258 | +6 105 | 38 |
| 39 | 97·95 | 3 | 85 14 0·6 | −19·698 | +0·093 | +1·138 | | 1299 | | 204 | | 261 | +4 123 | 39 |
| 40 | 02·23 | 3 | 82 57 32·2 | −19·692 | +0·094 | +0·037 | 85 | 1312 | 714 | | 161 | 265 | +6 107 | 40 |
| 41 | 98·16 | 3 | 84 8 16·6 | −19·675 | +0·096 | | | | | | | | +5 109 | 41 |
| 42 | 00·51 | 5 | 83 49 5·6 | −19·667 | +0·097 | | | | | | | | +5 111 | 42 |
| 43 | 98·78 | 3 | 87 47 56·2 | −19·651 | +0·098 | | | 1403 | | 216 | | | +1 149 | 43 |
| 44 | 97·26 | 3 | 87 9 26·5 | −19·647 | +0·099 | +0·058 | 91 | 1407 | 760 | 217 | | 281 | +2 118 | 44 |
| 45 | 97·84 | 3 | 83 52 41·0 | −19·623 | +0·102 | | | | 787 | | | | +5 117 | 45 |

13, 14, 39. Authority for Proper Motions: Auwers (Mayer's Sternverzeichnis). 21, 34. Authority for Proper Motions: Porter.
27, 30. Authority for Proper Motions: Boss.

| No. | Constellation. | Magnitude. | Number of Estimations. | Mean Year and Fraction of Year. | Number of Observations. | Mean R.A. | Precess. | Sec. Var. | Proper Motion. | No. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | h. m. s. | s. | s. | s. | |
| 46 | Ceti ... ... ... ... | 5·6 | ... | 94·86 | 5 | 0 47 45·97 | + 2·9464 | − 0·0077 | | 46 |
| 47 | 20 Ceti ... ... ... ... | 4·9 | ... | 99·35 | 5 | 0 47 53·72 | + 3·0646 | + 0·0037 | − 0·0022 | 47 |
| 48 | Piscium ... ... ... | 7·3 | 1 | 97·56 | 3 | 0 48 10·43 | + 3·0900 | + 0·0064 | − 0·0039 | 48 |
| 49 | Ceti ... ... ... ... | 7·9* | ... | 02·84 | 3 | 0 49 53·80 | + 3·0740 | + 0·0048 | | 49 |
| 50 | 37 Andromedae ... $\mu$ | 4·0 | ... | 00·23 | 6 | 0 51 11·94 | + 3·3038 | + 0·0308 | + 0·0141 | 50 |
| 51 | Ceti ... ... ... ... | 7·3 | ... | 97·88 | 3 | 0 52 31·36 | + 3·0793 | + 0·0054 | | 51 |
| 52 | Ceti ... ... ... ... | 7·2 | ... | 94·86 | 3 | 0 53 47·96 | + 2·9585 | − 0·0050 | + 0·0016 | 52 |
| 53 | 71 Piscium ... ... $\epsilon$ | 4·4 | ... | 98·80 | 17 | 0 57 45·08 | + 3·1157 | + 0·0089 | − 0·0070 | 53 |
| 54 | 26 Ceti ... ... ... ... | 6·0 | 1 | 97·95 | 3 | 0 58 40·10 | + 3·0776 | + 0·0055 | + 0·0064 | 54 |
| 55 | Ceti ... ... ... ... | 7·3 | ... | 98·84 | 3 | 0 59 34·87 | + 3·0834 | + 0·0060 | | 55 |
| 56 | 73 Piscium ... ... ... | 6·5 | 1 | 97·96 | 3 | 0 59 41·61 | + 3·1036 | + 0·0078 | + 0·0008 | 56 |
| 57 | Piscium ... ... ... | 8·0* | ... | 98·95 | 3 | 1 0 32·01 | + 3·0951 | + 0·0071 | | 57 |
| 58 | 77 Piscium ... ... ... | 6·4 | ... | 97·97 | 3 | 1 0 38·69 | + 3·0995 | + 0·0074 | − 0·0008 | 58 |
| 59 | Piscium ... ... ... | 8·2* | ... | 97·97 | 3 | 1 0 40·89 | + 3·0995 | + 0·0074 | − 0·0007 | 59 |
| 60 | 75 Piscium ... ... ... | 6·3 | ... | 97·97 | 3 | 1 1 17·88 | + 3·1505 | + 0·0119 | + 0·0003 | 60 |
| 61 | 29 Ceti ... ... ... ... | 6·7 | ... | 98·84 | 3 | 1 2 50·16 | + 3·0820 | + 0·0060 | + 0·0072 | 61 |
| 62 | Piscium ... ... ... | 6·9 | ... | 97·37 | 3 | 1 3 8·04 | + 3·1328 | + 0·0102 | + 0·0004 | 62 |
| 63 | 80 Piscium ... ... $e$ | 5·6 | ... | 97·99 | 3 | 1 3 12·97 | + 3·1053 | + 0·0079 | − 0·0195 | 63 |
| 64 | 43 Andromedae ... $\beta$ | 2·4 | ... | 99·89 | 9 | 1 4 7·74 | + 3·3321 | + 0·0288 | + 0·0144 | 64 |
| 65 | Cassiopeiae ... ... | 8·8 | 3 | 97·17 | 3 | 1 5 4·31 | + 3·5484 | + 0·0529 | | 65 |
| 66 | 33 Ceti ... ... ... ... | 6·5 | 2 | 97·97 | 3 | 1 5 24·73 | + 3·0853 | + 0·0064 | − 0·0017 | 66 |
| 67 | 35 Ceti ... ... ... ... | 6·8 | ... | 98·90 | 3 | 1 7 22·87 | + 3·0859 | + 0·0065 | − 0·0132 | 67 |
| 68 | 86 Piscium ... ... $\zeta^1$ | 5·3 | ... | 00·48 | 4 | 1 8 30·27 | + 3·1214 | + 0·0092 | + 0·0075 | 68 |
| 69 | Piscium ... ... ... | 8·1* | ... | 02·54 | 3 | 1 8 40·35 | + 3·1045 | + 0·0079 | | 69 |
| 70 | 37 Ceti ... ... ... ... | 5·2 | ... | 94·85 | 3 | 1 9 21·65 | + 3·0135 | + 0·0015 | + 0·0055 | 70 |
| 71 | 88 Piscium ... ... ... | 6·2 | ... | 97·94 | 3 | 1 9 30·15 | + 3·1180 | + 0·0089 | − 0·0024 | 71 |
| 72 | Ceti ... ... ... ... | 6·6 | ... | 98·89 | 3 | 1 10 27·50 | + 3·0754 | + 0·0058 | | 72 |
| 73 | Piscium ... ... ... | 7·8* | ... | 98·91 | 3 | 1 12 1·10 | + 3·0834 | + 0·0065 | | 73 |
| 74 | 89 Piscium ... ... $f$ | 5·4 | ... | 97·96 | 3 | 1 12 38·35 | + 3·0952 | + 0·0073 | − 0·0049 | 74 |
| 75 | Piscium ... ... ... | 8·0* | ... | 98·98 | 3 | 1 14 13·65 | + 3·0933 | + 0·0072 | + 0·0090 | 75 |
| 76 | Piscium ... ... ... | 7·7 | 1 | 95·80 | 3 | 1 14 32·63 | + 3·1149 | + 0·0087 | | 76 |
| 77 | Piscium ... ... ... | 6·8 | ... | 97·99 | 3 | 1 16 2·44 | + 3·1575 | + 0·0117 | | 77 |
| 78 | Piscium ... ... ... | 6·5 | ... | 98·90 | 3 | 1 17 27·86 | + 3·0821 | + 0·0066 | + 0·0006 | 78 |
| 79 | Piscium ... ... ... | 7·0 | 1 | 98·98 | 3 | 1 17 32·70 | + 3·1054 | + 0·0081 | − 0·0036 | 79 |
| 80 | Piscium ... ... ... | 9·4 | 1 | 00·91 | 3 | 1 18 9·90 | + 3·1118 | + 0·0085 | | 80 |
| 81 | Piscium ... ... ... | 9·3 | 1 | 98·71 | 3 | 1 18 20·57 | + 3·1168 | + 0·0088 | | 81 |
| 82 | 45 Ceti ... ... ... $\theta$ | 3·9 | ... | 00·89 | 4 | 1 19 1·44 | + 3·0036 | + 0·0020 | − 0·0068 | 82 |
| 83 | Piscium ... ... ... | 8·5 | 2 | 02·60 | 3 | 1 19 57·06 | + 3·1122 | + 0·0086 | | 83 |
| 84 | Piscium ... ... ... | 7·0 | ... | 02·90 | 3 | 1 20 30·85 | + 3·0924 | + 0·0073 | | 84 |
| 85 | Piscium ... ... ... | 9·0 | 2 | 98·26 | 3 | 1 21 8·27 | + 3·1143 | + 0·0087 | | 85 |
| 86 | Piscium ... ... ... | 6·5 | ... | 98·91 | 3 | 1 21 43·35 | + 3·0973 | + 0·0076 | | 86 |
| 87 | Ursae Minoris ... $a^1$ | 9·0 | 2 | 99·70 | 11 | 1 22 1·44 | + 24·8835 | + 19·8010 | | 87 |
| 88 | 95 Piscium ... ... ... | 7·2 | 1 | 98·96 | 3 | 1 22 28·24 | + 3·1126 | + 0·0086 | − 0·0042 | 88 |
| 89 | 1 Ursae Minoris ... $a$ | 2·1 | ... | 97·86 | 55 | 1 22 33·40 | + 25·0919 | + 20·0186 | + 0·1220 | 89 |
| 90 | Piscium ... ... ... | 6·4 | ... | 97·95 | 3 | 1 23 8·08 | + 3·1347 | + 0·0100 | | 90 |

65. A star (B.D. + 51° 244) following south is of magnitude 10·5, or one magnitude fainter than that given in the B.D.
76. Reddish. Much brighter than No. 45. The stars are both given in the B.D. as 8·7 magnitude.

| No. | Mean Year and Fraction of Year. | Number of Observations. | Mean N.P.D. | Precess. | Sec. Var. | Proper Motion. | Auwers' Bradley, 1755. | Lalande, 1800. | Weisse's Bessel (1), 1825. | Albany (A.G.), 1875. | Radcliffe, 1890. | Greenwich, 1890. | B.D. | No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ° ′ ″ | ″ | ″ | ″ | | | | | | | ° | |
| 46 | 94·86 | 5 | 114 33 2·3 | −19·618 | +0·097 | | | 1477 | | | 179 | | | 46 |
| 47 | 00·63 | 3 | 91 41 13·7 | −19·616 | +0·101 | +0·009 | 93 | 1474 | | | 180 | 298 | −1 114 | 47 |
| 48 | 97·56 | 3 | 86 27 22·0 | −19·611 | +0·102 | +0·024 | | 1481 | | 225 | | | +3 120 | 48 |
| 49 | 02·84 | 3 | 89 45 4·6 | −19·579 | +0·105 | | | | 825 | | | | +0 142 | 49 |
| 50 | 02·24 | 3 | 52 2 33·9 | −19·554 | +0·115 | −0·049 | 101 | 1578 | | | 196 | 321 | +37 175 | 50 |
| 51 | 97·88 | 3 | 88 45 19·5 | −19·528 | +0·110 | | | 1638 | 870 | 236 | | | +0 149 | 51 |
| 52 | 94·86 | 3 | 110 10 21·5 | −19·502 | +0·109 | +0·046 | | 1691 | | | 211 | 345 | −20 174 | 52 |
| 53 | 97·24 | 4 | 82 38 53·7 | −19·419 | +0·122 | −0·039 | 113 | 1819 | 970 | | 227 | 379 | +7 153 | 53 |
| 54 | 97·95 | 3 | 89 10 9·0 | −19·399 | +0·122 | +0·033 | 116 | 1853 | 987 | | | 392 | +0 174 | 54 |
| 55 | 98·84 | 3 | 88 13 18·9 | −19·378 | +0·124 | | | 1879 | 1002 | 280 | | | +1 203 | 55 |
| 56 | 97·96 | 3 | 84 52 47·1 | −19·376 | +0·125 | +0·004 | 120 | | 1005 | 281 | 232 | 396 | +4 172 | 56 |
| 57 | 98·95 | 3 | 86 20 9·9 | −19·357 | +0·126 | | | | 1019 | 284 | | | +3 155 | 57 |
| 58 | 97·97 | 3 | 85 37 25·9 | −19·354 | +0·126 | +0·119 | 124 | 1905 | | 286 | 242 | 406 | +4 175 | 58 |
| 59 | 97·97 | 3 | 85 37 21·7 | −19·353 | +0·127 | +0·100 | 125 | 1908 | | 287 | | 407 | +4 176 | 59 |
| 60 | 97·97 | 3 | 77 34 47·6 | −19·339 | +0·130 | −0·036 | 127 | 1930 | 1038 | | 246 | 410 | +12 135 | 60 |
| 61 | 98·84 | 3 | 88 31 46·3 | −19·303 | +0·130 | +0·438 | 133 | 1992 | 1071 | 303 | | 421 | +1 212 | 61 |
| 62 | 97·37 | 3 | 80 37 33·4 | −19·296 | +0·133 | −0·020 | | 2001 | 1075 | | | 424 | +9 132 | 62 |
| 63 | 97·99 | 3 | 84 52 45·3 | −19·294 | +0·132 | +0·174 | 136 | 2005 | | 305 | 261 | 426 | +4 190 | 63 |
| 64 | 01·67 | 8 | 54 54 34·3 | −19·272 | +0·142 | +0·084 | 140 | 2029 | | | 266 | 433 | +34 198 | 64 |
| 65 | 97·17 | 3 | 38 12 32·1 | −19·249 | +0·153 | | | | | | | | +51 243 | 65 |
| 66 | 97·97 | 3 | 88 5 11·1 | −19·241 | +0·135 | +0·004 | 148 | 2093 | 27 | 318 | | 442 | +1 221 | 66 |
| 67 | 98·90 | 3 | 88 3 23·9 | −19·192 | +0·139 | +0·130 | 154 | 2160 | 61 | 325 | | 455 | +1 223 | 67 |
| 68 | 01·95 | 3 | 82 57 11·5 | −19·163 | +0·142 | +0·051 | 158 | 2187 | 75 | | 284 | 461 | +6 174 | 68 |
| 69 | 02·54 | 3 | 85 23 14·9 | −19·159 | +0·142 | | | | 80 | 331 | | | +4 212 | 69 |
| 70 | 94·86 | 4 | 98 27 37·2 | −19·141 | +0·139 | −0·279 | 164 | 2220 | 95 | | 290 | 472 | −8 216 | 70 |
| 71 | 97·94 | 3 | 83 32 1·1 | −19·137 | +0·144 | +0·021 | 162 | 2216 | 97 | | | 474 | +6 181 | 71 |
| 72 | 98·89 | 3 | 89 36 58·9 | −19·112 | +0·144 | | | 2258 | 111 | | 295 | | +0 210 | 72 |
| 73 | 98·91 | 3 | 88 30 45·4 | −19·070 | +0·147 | | | | 138 | 348 | | | +1 241 | 73 |
| 74 | 97·96 | 3 | 86 54 43·7 | −19·053 | +0·149 | +0·019 | 171 | 2329 | | 354 | | 484 | +2 185 | 74 |
| 75 | 98·98 | 3 | 87 14 9·6 | −19·010 | +0·152 | +0·028 | | | 176 | 362 | | | +2 190 | 75 |
| 76 | 95·80 | 3 | 84 21 49·7 | −19·001 | +0·153 | | | 2393 | 180 | | | | +5 168 | 76 |
| 77 | 97·99 | 3 | 78 59 14·9 | −18·959 | +0·158 | | | 2435 | 209 | | | 501 | +10 168 | 77 |
| 78 | 98·90 | 3 | 88 47 45·1 | −18·918 | +0·157 | +0·046 | | 2479 | 233 | 372 | | | +0 223 | 78 |
| 79 | 98·98 | 3 | 85 47 4·1 | −18·915 | +0·158 | −0·002 | | 2485 | 235 | 373 | | 506 | +3 190 | 79 |
| 80 | 00·91 | 3 | 85 0 43·4 | −18·897 | +0·160 | | | | | | | | +4 235 | 80 |
| 81 | 98·71 | 3 | 84 23 24·4 | −18·892 | +0·161 | | | | | | | | +5 175 | 81 |
| 82 | 02·25 | 3 | 98 41 57·3 | −18·872 | +0·156 | +0·196 | 184 | 2541 | 268 | | 325 | 513 | −8 244 | 82 |
| 83 | 02·60 | 3 | 85 3 56·4 | −18·844 | +0·163 | | | 2579 | | 392 | | | +4 248 | 83 |
| 84 | 02·90 | 3 | 87 32 53·3 | −18·827 | +0·163 | | | 2589 | 295 | 394 | | | +2 207 | 84 |
| 85 | 95·85 | 3 | 84 52 31·3 | −18·809 | +0·166 | | | | 309 | 396 | | | +4 249 | 85 |
| 86 | 98·91 | 3 | 86 59 0·6 | −18·791 | +0·166 | | | 2632 | 322 | 397 | | | +2 211 | 86 |
| 87 | 98·72 | 13 | 1 13 48·2 | −18·781 | +1·280 | | | | | | 319 | 510 | +88 7 | 87 |
| 88 | 98·96 | 3 | 85 9 45·4 | −18·768 | +0·168 | +0·141 | 194 | | 337 | 404 | | | +4 251 | 88 |
| 89 | 98·23 | 81 | 1 13 33·3 | −18·765 | +1·299 | +0·002 | 102 | | | | 324 | 512 | +88 8 | 89 |
| 90 | 97·95 | 3 | 82 33 24·7 | −18·747 | +0·170 | | | 2677 | 347 | | | 534 | +7 213 | 90 |

48, 62, 75, 78, 79. Authority for Proper Motions : Auwers (Mayer's Sternverzeichnis). 50. The Proper Motions adopted are those of Auwers' Bradley, but other values in R.A. are Auwers (Astronomische Nachrichten, 3928) +$c^s$·0124, and Newcomb (Fundamental Catalogue) +$0^s$·0132. 52. Authority for Proper Motions : Auwers (Astronomische Nachrichten, 3511).

| No. | Constellation. | Magnitude. | Number of Estimations. | Mean Year and Fraction of Year. | Number of Observations. | Mean R.A. | Precess. | Sec. Var. | Proper Motion. | No. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | h. m. s. | s. | s. | s. | |
| 91 | Persei ... ... ... ... | 9·3 | 1 | 96·83 | 2 | 1 23 49·64 | +3·6794 | +0·0553 | | 91 |
| 92 | Ceti ... ... ... ... | 8·0 | 1 | 02·91 | 3 | 1 24 45·48 | +3·0715 | +0·0062 | | 92 |
| 93 | 98 Piscium ... ... $\mu$ | 5·0 | ... | 97·96 | 3 | 1 24 56·63 | +3·1204 | +0·0091 | +0·0177 | 93 |
| 94 | Piscium ... ... R | Var. | ... | 02·84 | 3 | 1 25 28·62 | +3·0929 | +0·0075 | | 94 |
| 95 | 99 Piscium ... ... $\eta$ | 3·8 | ... | 01·43 | 4 | 1 26 7·80 | +3·2026 | +0·0143 | −0·0002 | 95 |
| 96 | Trianguli ... ... ... | 9·1 | 1 | 95·40 | 4 | 1 27 31·72 | +3·4052 | +0·0287 | | 96 |
| 97 | 102 Piscium ... ... $\pi$ | 5·6 | ... | 97·93 | 3 | 1 31 47·78 | +3·1800 | +0·0126 | −0·0064 | 97 |
| 98 | Piscium ... ... ... | 7·8* | ... | 98·90 | 3 | 1 33 10·14 | +3·0919 | +0·0076 | | 98 |
| 99 | 105 Piscium ... ... ... | 6·1 | ... | 97·97 | 3 | 1 34 16·95 | +3·2250 | +0·0152 | +0·0032 | 99 |
| 100 | Ceti ... ... ... ... | 7·8* | ... | 02·26 | 3 | 1 34 17·56 | +3·0737 | +0·0067 | | 100 |
| 101 | 106 Piscium ... ... $\nu$ | 4·6 | ... | 98·06 | 12 | 1 36 13·52 | +3·1202 | +0·0092 | −0·0034 | 101 |
| 102 | Piscium ... ... ... | 6·9 | 1 | 98·58 | 3 | 1 39 25·76 | +3·0994 | +0·0082 | | 102 |
| 103 | Piscium ... ... ... | 7·7* | ... | 98·97 | 3 | 1 39 55·12 | +3·0924 | +0·0078 | | 103 |
| 104 | 110 Piscium ... ... $o$ | 4·5 | ... | 98·82 | 17 | 1 40 6·66 | +3·1588 | +0·0112 | +0·0029 | 104 |
| 105 | Piscium ... ... ... | 6·8 | ... | 99·01 | 3 | 1 40 33·15 | +3·1041 | +0·0084 | | 105 |
| 106 | Piscium ... ... ... | 6·9 | ... | 99·03 | 3 | 1 40 44·50 | +3·1017 | +0·0083 | | 106 |
| 107 | 3 Arietis ... ... ... | 6·4 | ... | 97·94 | 3 | 1 41 9·45 | +3·2463 | +0·0160 | +0·0019 | 107 |
| 108 | 4 Arietis ... ... ... | 5·7 | 1 | 97·97 | 3 | 1 42 45·36 | +3·2439 | +0·0157 | +0·0015 | 108 |
| 109 | Piscium ... ... ... | 6·4 | 1 | 98·93 | 3 | 1 43 15·08 | +3·1051 | +0·0085 | | 109 |
| 110 | Ceti ... ... ... ... | 7·7 | 1 | 02·28 | 3 | 1 43 51·70 | +3·0812 | +0·0074 | | 110 |
| 111 | Cassiopeiae ... ... | 9·0 | 1 | 97·92 | 3 | 1 45 5·32 | +4·4169 | +0·1205 | | 111 |
| 112 | 54 Ceti ... ... ... ... | 6·0 | ... | 97·96 | 3 | 1 45 33·55 | +3·1834 | +0·0124 | −0·0062 | 112 |
| 113 | 55 Ceti ... ... ... $\zeta$ | 4·0 | ... | 98·34 | 3 | 1 46 31·34 | +2·9581 | +0·0024 | +0·0003 | 113 |
| 114 | 111 Piscium ... ... $\xi$ | 4·9 | ... | 98·59 | 3 | 1 48 22·59 | +3·1014 | +0·0084 | +0·0004 | 114 |
| 115 | 6 Arietis ... ... $\beta$ | 2·7 | ... | 99·75 | 14 | 1 49 6·79 | +3·2996 | +0·0184 | +0·0050 | 115 |
| 116 | Piscium ... ... ... | 6·2 | ... | 98·95 | 3 | 1 50 43·55 | +3·0874 | +0·0079 | +0·0090 | 116 |
| 117 | 8 Arietis ... ... $\iota$ | 5·1 | ... | 97·98 | 4 | 1 51 53·13 | +3·2684 | +0·0165 | +0·0011 | 117 |
| 118 | Persei ... ... ... ... | 9·2* | ... | 02·86 | 3 | 1 53 45·35 | +3·8395 | +0·0544 | | 118 |
| 119 | Arietis ... ... ... | 6·0 | ... | 97·98 | 3 | 1 54 4·54 | +3·2062 | +0·0133 | −0·0013 | 119 |
| 120 | Ceti ... ... ... ... | 8·0 | 1 | 95·55 | 3 | 1 54 19·94 | +2·7959 | −0·0018 | | 120 |
| 121 | Ceti ... ... ... ... | 7·7 | 1 | 95·55 | 3 | 1 54 20·47 | +2·7959 | −0·0018 | | 121 |
| 122 | 112 Piscium ... ... ... | 5·8 | ... | 98·59 | 3 | 1 54 56·87 | +3·1021 | +0·0086 | +0·0141 | 122 |
| 123 | Piscium ... ... ... | 7·1 | ... | 01·99 | 3 | 1 55 9·65 | +3·1167 | +0·0092 | | 123 |
| 124 | 113 Piscium ... ... $\alpha^1$ | 6·5 | 1 | 99·07 | 3 | 1 56 52·09 | +3·0987 | +0·0085 | +0·0016 | 124 |
| 125 | 113 Piscium ... ... $a$ | 5·3 | 2 | 98·48 | 4 | 1 56 52·25 | +3·0987 | +0·0085 | +0·0016 | 125 |
| 126 | Arietis ... ... ... | 6·3 | ... | 97·92 | 3 | 1 57 12·04 | +3·2237 | +0·0140 | | 126 |
| 127 | Piscium ... ... ... | 7·6 | 1 | 98·95 | 3 | 1 57 49·18 | +3·1057 | +0·0088 | +0·0090 | 127 |
| 128 | 13 Arietis ... ... $a$ | 2·3 | ... | 00·68 | 10 | 2 1 31·98 | +3·3596 | +0·0204 | +0·0127 | 128 |
| 129 | Ceti ... ... ... ... | 8·0* | ... | 01·97 | 3 | 2 1 39·38 | +3·0841 | +0·0080 | | 129 |
| 130 | Ceti ... ... ... ... | 7·8 | 2 | 99·04 | 3 | 2 2 25·04 | +3·1341 | +0·0100 | | 130 |
| 131 | Ceti ... ... ... ... | 7·5 | ... | 97·93 | 3 | 2 4 27·36 | +3·1181 | +0·0094 | | 131 |
| 132 | Ceti ... ... ... ... | 6·9 | ... | 98·96 | 3 | 2 4 39·51 | +3·1126 | +0·0092 | | 132 |
| 133 | 15 Arietis ... ... ... | 5·9 | ... | 97·94 | 3 | 2 5 4·88 | +3·3120 | +0·0177 | +0·0051 | 133 |
| 134 | 64 Ceti ... ... ... ... | 5·8 | ... | 97·96 | 3 | 2 6 4·24 | +3·1722 | +0·0115 | −0·0105 | 134 |
| 135 | Cassiopeiae ... ... | 9·0 | 1 | 98·31 | 3 | 2 6 14·87 | +4·5000 | +0·1072 | | 135 |

94. The magnitude varies from 7 to below 13; the period is 344 days. 101. Reddish-orange. 102. Reddish.
104. W.B. magnitude, 9. 113. Reddish-yellow. 124. Slight orange tint.

| No. | Mean Year and Fraction of Year. | Number of Observations. | Mean N.P.D. | Precess. | Sec. Var. | Proper Motion. | Auwers' Bradley, 1755. | Lalande, 1800. | Weisse's Bessel (1), 1825. | Albany (A.G.), 1875. | Radcliffe, 1890. | Greenwich, 1890. | B.D. | No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ° ′ ″ | ″ | ″ | ″ | | | | | | | ° | |
| 91 | 96·83 | 2 | 38 14 20·1 | −18·726 | +0·200 | | | | | | | | +51 316 | 91 |
| 92 | 02·91 | 3 | 90 8 33·0 | −18·697 | +0·170 | | | | 375 | | | | −0 240 | 92 |
| 93 | 97·96 | 3 | 84 22 17·6 | −18·690 | +0·173 | +0·031 | 199 | 2735 | 379 | | 352 | 544 | +5 194 | 93 |
| 94 | 02·84 | 3 | 87 38 2·8 | −18·674 | +0·172 | | | | | 413 | | | +2 222 | 94 |
| 95 | 03·08 | 7 | 75 10 10·5 | −18·653 | +0·179 | +0·003 | 203 | 2763 | | | 356 | 548 | +14 231 | 95 |
| 96 | 95·40 | 4 | 56 16 54·7 | −18·607 | +0·193 | | | | | | | | +33 253 | 96 |
| 97 | 97·93 | 3 | 78 22 11·8 | −18·465 | +0·189 | −0·054 | 214 | 2951 | 501 | | 378 | 574 | +11 205 | 97 |
| 98 | 98·90 | 3 | 87 55 22·0 | −18·418 | +0·186 | | | 3012 | | 457 | | | +1 293 | 98 |
| 99 | 97·97 | 3 | 74 6 4·5 | −18·379 | +0·196 | +0·008 | 223 | 3041 | | | 391 | 584 | +15 245 | 99 |
| 100 | 02·26 | 3 | 89 53 45·7 | −18·379 | +0·187 | | | 3045 | 556 | | | | −0 257 | 100 |
| 101 | 97·63 | 3 | 85 1 5·3 | −18·310 | +0·193 | −0·005 | 228 | 3111 | 609 | 474 | 396 | 589 | +4 293 | 101 |
| 102 | 98·58 | 3 | 87 16 43·1 | −18·194 | +0·198 | | | | 679 | 495 | | | +2 259 | 102 |
| 103 | 98·97 | 3 | 87 59 55·3 | −18·176 | +0·198 | | | 3206 | 686 | 498 | | | +1 313 | 103 |
| 104 | 97·35 | 5 | 81 20 43·3 | −18·169 | +0·203 | −0·058 | 232 | 3212 | 688 | | 407 | 606 | +8 273 | 104 |
| 105 | 99·01 | 3 | 86 50 2·2 | −18·153 | +0·200 | | | 3226 | | 499 | | | +2 266 | 105 |
| 106 | 99·03 | 3 | 87 5 0·2 | −18·146 | +0·200 | | | 3230 | | 501 | | | +2 268 | 106 |
| 107 | 97·94 | 3 | 73 5 16·3 | −18·131 | +0·210 | −0·002 | 234 | 3238 | | | | | +16 196 | 107 |
| 108 | 97·97 | 3 | 73 32 32·3 | −18·070 | +0·213 | +0·016 | 235 | 3278 | | | | 613 | +16 203 | 108 |
| 109 | 98·93 | 3 | 86 48 49·5 | −18·051 | +0·205 | | | 3298 | 735 | 512 | | 615 | +2 270 | 109 |
| 110 | 02·28 | 3 | 89 9 57·9 | −18·028 | +0·204 | | | | 745 | | | | +0 294 | 110 |
| 111 | 97·92 | 3 | 23 45 30·7 | −17·981 | +0·293 | | | | | | | | +66 167 | 111 |
| 112 | 97·96 | 3 | 79 27 6·1 | −17·962 | +0·214 | +0·031 | 243 | 3380 | 767 | | 425 | 623 | +10 252 | 112 |
| 113 | 98·34 | 3 | 100 49 45·1 | −17·925 | +0·201 | +0·028 | 247 | 3416 | 794 | | 428 | 626 | −11 359 | 113 |
| 114 | 98·59 | 3 | 87 18 21·7 | −17·852 | +0·214 | −0·020 | 251 | 3478 | 827 | 534 | | 636 | +2 290 | 114 |
| 115 | 02·77 | 12 | 69 40 50·5 | −17·822 | +0·228 | +0·102 | 252 | 3494 | | | 435 | 640 | +20 306 | 115 |
| 116 | 98·95 | 3 | 88 38 44·8 | −17·757 | +0·217 | −0·180 | | 3563 | 865 | 547 | | | +1 347 | 116 |
| 117 | 97·99 | 3 | 72 40 13·4 | −17·710 | +0·231 | +0·019 | 262 | 3594 | | | | 659 | +17 289 | 117 |
| 118 | 02·86 | 3 | 39 41 57·8 | −17·633 | +0·274 | | | | | | | | +50 418 | 118 |
| 119 | 97·98 | 3 | 78 11 23·6 | −17·619 | +0·231 | +0·025 | | 3663 | 912 | | 449 | 669 | +11 261 | 119 |
| 120 | 95·55 | 3 | 113 24 20·7 | −17·608 | +0·203 | | | 3684 | | | 451 | | | 120 |
| 121 | 95·55 | 3 | 113 24 25·3 | −17·608 | +0·203 | | | 3684 | | | 452 | | | 121 |
| 122 | 98·59 | 3 | 87 22 51·6 | −17·582 | +0·225 | +0·250 | 271 | 3688 | 933 | 560 | | 675 | +2 311 | 122 |
| 123 | 01·99 | 3 | 86 5 43·5 | −17·573 | +0·227 | | | 3696 | 940 | 561 | | | +3 273 | 123 |
| 124 | 99·07 | 3 | 87 43 7·0 | −17·501 | +0·228 | +0·009 | 277 | 3768 | | 571 | | 684 | +2 317 | 124 |
| 125 | 98·48 | 4 | 87 43 9·8 | −17·501 | +0·228 | +0·009 | 277 | 3768 | | 572 | | 685 | +2 317 | 125 |
| 126 | 97·92 | 3 | 77 0 20·3 | −17·487 | +0·238 | | | | 973 | | | 688 | +12 271 | 126 |
| 127 | 98·95 | 3 | 87 7 38·4 | −17·460 | +0·230 | −0·140 | | | 987 | 577 | | | +2 321 | 127 |
| 128 | 03·27 | 12 | 67 0 37·2 | −17·298 | +0·255 | +0·134 | 287 | 3870 | | | 478 | 705 | +22 306 | 128 |
| 129 | 01·97 | 3 | 89 2 6·4 | −17·293 | +0·235 | | | | | | | | +0 352 | 129 |
| 130 | 99·04 | 3 | 84 50 57·3 | −17·259 | +0·240 | | | 3914 | 1072 | 597 | | | +4 354 | 130 |
| 131 | 97·93 | 3 | 86 14 27·1 | −17·168 | +0·242 | | | 3978 | 7 | 602 | | | +3 288 | 131 |
| 132 | 98·96 | 3 | 86 42 13·3 | −17·158 | +0·242 | | | 3985 | 13 | 604 | | | +3 289 | 132 |
| 133 | 97·94 | 3 | 70 58 16·8 | −17·139 | +0·258 | +0·031 | 296 | 3988 | | | 498 | 722 | +18 277 | 133 |
| 134 | 97·96 | 3 | 81 53 54·2 | −17·094 | +0·249 | +0·100 | 302 | 4035 | 32 | | | 726 | +7 347 | 134 |
| 135 | 98·31 | 3 | 26 6 57·7 | −17·086 | +0·351 | | | | | | | 725 | +63 305 | 135 |

116. Authority for Proper Motions: Porter. 119. Authority for Proper Motions: Auwers (Mayer's Sternverzeichnis).
127. The Proper Motions have been specially computed for the present catalogue.

| No. | Constellation. | Magnitude. | Number of Estimations. | Mean Year and Fraction of Year. | Number of Observations. | Mean R.A. | Precess. | Sec. Var. | Proper Motion. | No. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | h. m. s. | s. | s. | s. | |
| 136 | Ceti ... ... ... ... | 6·7 | ... | 99·05 | 3 | 2 6 31·91 | +3·1092 | +0·0090 | | 136 |
| 137 | Ceti ... ... ... ... | 6·7 | ... | 98·95 | 3 | 2 7 5·12 | +3·1007 | +0·0087 | | 137 |
| 138 | 19 Arietis ... ... ... | 6·3 | 1 | 97·63 | 3 | 2 7 35·88 | +3·2595 | +0·0152 | +0·0049 | 138 |
| 139 | 65 Ceti ... ... ... $\xi^1$ | 4·6 | ... | 01·70 | 9 | 2 7 41·86 | +3·1768 | +0·0117 | −0·0032 | 139 |
| 140 | Ceti ... ... ... ... | 7·4 | 1 | 99·07 | 3 | 2 8 15·91 | +3·1291 | +0·0098 | +0·0011 | 140 |
| 141 | Ceti ... ... ... ... | 7·8 | 1 | 99·08 | 3 | 2 9 27·86 | +3·0879 | +0·0083 | | 141 |
| 142 | Ceti ... ... ... ... | 6·7 | ... | 99·03 | 3 | 2 10 1·54 | +3·0759 | +0·0079 | | 142 |
| 143 | Ceti ... ... ... ... | 8·0* | ... | 01·98 | 3 | 2 11 13·28 | +3·1254 | +0·0097 | | 143 |
| 144 | 67 Ceti ... ... ... ... | 5·7 | ... | 00·93 | 7 | 2 11 59·68 | +2·9848 | +0·0050 | +0·0036 | 144 |
| 145 | 22 Arietis ... ... $\theta$ | 5·6 | ... | 97·97 | 3 | 2 12 33·66 | +3·3306 | +0·0181 | −0·0023 | 145 |
| 146 | Ceti ... ... ... ... | 5·8 | ... | 97·93 | 3 | 2 12 49·61 | +3·0892 | +0·0084 | +0·0220 | 146 |
| 147 | Ceti ... ... ... ... | 7·8* | ... | 02·85 | 3 | 2 14 17·73 | +3·1032 | +0·0089 | | 147 |
| 148 | 69 Ceti ... ... ... ... | 5·5 | ... | 01·95 | 3 | 2 16 49·08 | +3·0719 | +0·0079 | −0·0015 | 148 |
| 149 | Ceti ... ... ... ... | 8·3* | ... | 02·02 | 3 | 2 17 47·72 | +3·1169 | +0·0094 | | 149 |
| 150 | 24 Arietis ... ... $\xi$ | 5·5 | 1 | 97·67 | 4 | 2 19 27·30 | +3·2096 | +0·0127 | −0·0007 | 150 |
| 151 | Ceti ... ... ... ... | 6·5 | ... | 98·32 | 3 | 2 22 50·21 | +3·0933 | +0·0087 | | 151 |
| 152 | 73 Ceti ... ... ... $\xi^2$ | 4·3 | ... | 99·19 | 11 | 2 22 50·43 | +3·1825 | +0·0117 | +0·0011 | 152 |
| 153 | Ceti ... ... ... ... | 6·3 | ... | 97·98 | 3 | 2 24 14·88 | +3·1990 | +0·0122 | | 153 |
| 154 | Ceti ... ... ... ... | 8·2* | ... | 01·97 | 3 | 2 24 54·27 | +3·1302 | +0·0099 | | 154 |
| 155 | 26 Arietis ... ... ... | 6·2 | ... | 98·33 | 3 | 2 25 1·80 | +3·3513 | +0·0180 | +0·0043 | 155 |
| 156 | 27 Arietis ... ... ... | 6·4 | ... | 98·33 | 3 | 2 25 21·44 | +3·3189 | +0·0167 | +0·0014 | 156 |
| 157 | Ceti ... ... ... ... | 5·4 | ... | 98·95 | 3 | 2 26 19·65 | +3·0981 | +0·0089 | | 157 |
| 158 | Ceti ... ... ... ... | 7·7† | ... | 99·04 | 3 | 2 26 20·83 | +3·0817 | +0·0084 | | 158 |
| 159 | Ceti ... ... ... ... | 7·2† | ... | 99·04 | 3 | 2 26 21·40 | +3·0818 | +0·0084 | | 159 |
| 160 | 29 Arietis ... ... ... | 6·1 | ... | 97·96 | 3 | 2 27 25·33 | +3·2815 | +0·0151 | −0·0028 | 160 |
| 161 | Ceti ... ... ... ... | 7·5 | ... | 99·01 | 3 | 2 27 33·74 | +3·0810 | +0·0084 | | 161 |
| 162 | Ceti ... ... ... ... | 8·0* | ... | 02·04 | 3 | 2 29 56·24 | +3·1252 | +0·0097 | | 162 |
| 163 | 78 Ceti ... ... ... $\nu$ | 5·1 | ... | 98·46 | 8 | 2 30 37·45 | +3·1465 | +0·0104 | −0·0051 | 163 |
| 164 | 31 Arietis ... ... ... | 5·7 | ... | 97·93 | 3 | 2 31 10·57 | +3·2471 | +0·0137 | +0·0177 | 164 |
| 165 | 32 Arietis ... ... $\nu$ | 5·3 | ... | 98·29 | 3 | 2 33 8·17 | +3·3994 | +0·0193 | −0·0019 | 165 |
| 166 | Ceti ... ... ... ... | 6·7 | 1 | 98·99 | 3 | 2 33 24·46 | +3·1164 | +0·0095 | | 166 |
| 167 | 82 Ceti ... ... ... $\delta$ | 3·9 | ... | 00·63 | 9 | 2 34 21·34 | +3·0712 | +0·0082 | +0·0004 | 167 |
| 168 | Ceti ... ... ... ... | 7·8* | ... | 99·07 | 3 | 2 35 42·25 | +3·1380 | +0·0101 | | 168 |
| 169 | Ceti ... ... ... ... | 7·1 | 1 | 99·07 | 3 | 2 36 7·86 | +3·1316 | +0·0099 | | 169 |
| 170 | Ceti ... ... ... ... | 6·7 | ... | 02·61 | 3 | 2 36 22·43 | +3·0745 | +0·0083 | | 170 |
| 171 | 34 Arietis ... ... $\mu$ | 5·7 | ... | 98·63 | 3 | 2 36 43·52 | +3·3732 | +0·0180 | +0·0009 | 171 |
| 172 | 85 Ceti ... ... ... ... | 6·3 | ... | 98·66 | 3 | 2 37 5·71 | +3·2268 | +0·0128 | −0·0041 | 172 |
| 173 | 86 Ceti ... ... ... $\gamma^2$ | 3·6 | ... | 99·46 | 4 | 2 38 7·05 | +3·1145 | +0·0094 | −0·0114 | 173 |
| 174 | 36 Arietis ... ... ... | 6·5 | ... | 98·63 | 3 | 2 38 44·13 | +3·3393 | +0·0166 | +0·0024 | 174 |
| 175 | 37 Arietis ... ... $o$ | 5·8 | ... | 98·63 | 3 | 2 39 2·16 | +3·3000 | +0·0152 | −0·0013 | 175 |
| 176 | 38 Arietis ... ... ... | 5·2 | ... | 98·70 | 3 | 2 39 30·54 | +3·2553 | +0·0137 | +0·0073 | 176 |
| 177 | 87 Ceti ... ... ... $\mu$ | 4·3 | ... | 98·67 | 3 | 2 39 32·09 | +3·2191 | +0·0125 | +0·0164 | 177 |
| 178 | Ceti ... ... ... ... | 6·7 | 2 | 99·07 | 3 | 2 40 6·21 | +3·1372 | +0·0101 | | 178 |
| 179 | Arietis ... ... ... | 7·3 | ... | 98·64 | 3 | 2 41 31·40 | +3·4322 | +0·0198 | | 179 |
| 180 | 40 Arietis ... ... ... | 6·0 | ... | 98·41 | 4 | 2 42 55·56 | +3·3539 | +0·0169 | +0·0018 | 180 |

139. W.B. magnitude, 9. 158, 159. The second star is brighter than the first by 0·6 magnitude.

| No. | Mean Year and Fraction of Year. | Number of Observations. | Mean N.P.D. | Precess. | Sec. Var. | Proper Motion. | Auwers' Bradley, 1755. | Lalande, 1800. | Weisse's Bessel (1), 1825. | Albany (A.G.), 1875. | Radcliffe, 1890. | Greenwich, 1890. | B.D. | No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ° ′ ″ | ″ | ″ | ″ | | | | | | | ° | |
| 136 | 99·05 | 3 | 87 1 5·0 | −17·073 | +0·245 | | | 4053 | | 612 | | | +2 346 | 136 |
| 137 | 98·95 | 3 | 87 43 30·3 | −17·047 | +0·245 | | | 4077 | 58 | 616 | | | +2 347 | 137 |
| 138 | 97·63 | 3 | 75 11 19·3 | −17·024 | +0·258 | +0·016 | 305 | 4091 | 62 | | 511 | 738 | +14 357 | 138 |
| 139 | 01·95 | 3 | 81 37 19·7 | −17·019 | +0·252 | +0·001 | 306 | 4074 | 65 | | 513 | 739 | +8 345 | 139 |
| 140 | 99·07 | 3 | 85 27 15·7 | −16·993 | +0·250 | +0·066 | | 4113 | 76 | 623 | | | +4 367 | 140 |
| 141 | 99·08 | 3 | 88 47 21·3 | −16·937 | +0·248 | | | 4152 | 97 | 628 | | | +0 369 | 141 |
| 142 | 99·03 | 3 | 89 44 44·1 | −16·910 | +0·248 | | | 4174 | 106 | | 522 | | +0 370 | 142 |
| 143 | 02·26 | 4 | 85 50 16·7 | −16·854 | +0·254 | | | 4212 | 123 | 637 | | | +3 313 | 143 |
| 144 | 00·61 | 3 | 96 52 58·2 | −16·817 | +0·244 | +0·109 | 321 | 4250 | 140 | | 530 | 767 | −7 393 | 144 |
| 145 | 97·97 | 3 | 70 33 40·8 | −16·790 | +0·273 | −0·010 | 320 | 4243 | | | 532 | 770 | +19 340 | 145 |
| 146 | 97·93 | 3 | 88 42 54·1 | −16·778 | +0·254 | −0·350 | | 4268 | 147 | 648 | | | +1 410 | 146 |
| 147 | 02·85 | 3 | 87 38 25·2 | −16·707 | +0·258 | | | 4318 | 177 | 655 | | | +2 360 | 147 |
| 148 | 01·95 | 3 | 90 3 39·4 | −16·584 | +0·259 | +0·015 | 333 | | 221 | | 548 | | −0 355 | 148 |
| 149 | 02·02 | 3 | 86 39 24·2 | −16·536 | +0·264 | | | | | 666 | | | +3 327 | 149 |
| 150 | 97·59 | 3 | 79 50 31·8 | −16·453 | +0·275 | +0·013 | 338 | 4449 | 268 | | | 800 | +9 316 | 150 |
| 151 | 98·32 | 3 | 88 29 14·6 | −16·282 | +0·270 | | | 4565 | 334 | 682 | | | +1 431 | 151 |
| 152 | 00·99 | 3 | 81 59 16·6 | −16·282 | +0·278 | +0·001 | 347 | 4557 | 329 | | 574 | 819 | +7 388 | 152 |
| 153 | 97·98 | 3 | 80 52 50·6 | −16·210 | +0·282 | | | 4602 | 358 | | | 830 | +8 385 | 153 |
| 154 | 01·97 | 3 | 85 50 23·8 | −16·176 | +0·277 | | | | | 696 | | | +3 346 | 154 |
| 155 | 98·33 | 3 | 70 35 18·5 | −16·169 | +0·296 | +0·025 | 349 | 4623 | | | | 833 | +19 365 | 155 |
| 156 | 98·33 | 3 | 72 44 17·9 | −16·153 | +0·294 | +0·086 | 351 | 4636 | | | | 834 | +17 380 | 156 |
| 157 | 98·95 | 3 | 88 10 33·4 | −16·102 | +0·276 | | | 4681 | 399 | 705 | | | +1 438 | 157 |
| 158 | 99·04 | 3 | 89 21 4·9 | −16·101 | +0·275 | | | 4684 | 400 | | | | +0 415 | 158 |
| 159 | 99·04 | 3 | 89 20 53·9 | −16·100 | +0·275 | | | 4686 | 401 | | | | +0 415 | 159 |
| 160 | 97·96 | 3 | 75 24 28·9 | −16·045 | +0·294 | −0·036 | 352 | 4707 | 412 | | | 844 | +14 419 | 160 |
| 161 | 99·01 | 3 | 89 24 28·9 | −16·037 | +0·277 | | | 4725 | 418 | | | | +0 421 | 161 |
| 162 | 02·04 | 3 | 86 18 40·0 | −15·912 | +0·284 | | | | 455 | 720 | | | +3 359 | 162 |
| 163 | 01·95 | 3 | 84 50 34·2 | −15·875 | +0·287 | +0·028 | 362 | | 472 | 724 | 611 | 858 | +4 418 | 163 |
| 164 | 97·93 | 3 | 77 59 9·0 | −15·845 | +0·297 | +0·075 | 364 | 4828 | | | 615 | 862 | +11 360 | 164 |
| 165 | 98·29 | 3 | 68 28 15·2 | −15·740 | +0·314 | +0·011 | 367 | 4886 | | | | 868 | +21 362 | 165 |
| 166 | 98·99 | 3 | 86 59 23·5 | −15·725 | +0·289 | | | 4905 | 523 | 733 | | | +2 406 | 166 |
| 167 | 02·37 | 5 | 90 6 9·2 | −15·674 | +0·286 | +0·007 | 372 | 4927 | 547 | | 631 | 871 | −0 406 | 167 |
| 168 | 99·07 | 3 | 85 33 29·6 | −15·600 | +0·294 | | | | 573 | 745 | | | +4 425 | 168 |
| 169 | 99·07 | 3 | 85 59 57·2 | −15·576 | +0·294 | | | | 585 | 748 | | | +3 373 | 169 |
| 170 | 02·61 | 3 | 89 52 53·7 | −15·563 | +0·289 | | | | 592 | | | | −0 410 | 170 |
| 171 | 98·63 | 3 | 70 24 52·0 | −15·543 | +0·318 | +0·037 | 377 | 4992 | | | | 879 | +19 403 | 171 |
| 172 | 98·66 | 3 | 79 41 4·0 | −15·523 | +0·305 | +0·028 | 381 | 5006 | 600 | | | 880 | +10 360 | 172 |
| 173 | 99·94 | 3 | 87 11 7·8 | −15·466 | +0·296 | +0·156 | 383 | 5045 | 616 | 759 | 647 | 886 | +2 422 | 173 |
| 174 | 98·63 | 3 | 72 39 32·9 | −15·432 | +0·318 | +0·032 | 384 | 5051 | | | | 889 | +17 426 | 174 |
| 175 | 98·63 | 3 | 75 6 41·3 | −15·415 | +0·314 | +0·022 | 385 | 5061 | | | | 890 | +14 457 | 175 |
| 176 | 98·70 | 3 | 77 58 29·3 | −15·389 | +0·311 | +0·069 | 386 | 5075 | 634 | | 652 | 893 | +11 377 | 176 |
| 177 | 98·67 | 3 | 80 18 28·9 | −15·387 | +0·308 | +0·020 | 387 | 5079 | 636 | | 653 | 894 | +9 359 | 177 |
| 178 | 99·07 | 3 | 85 42 34·0 | −15·355 | +0·301 | | | 5110 | 652 | 772 | | | +4 437 | 178 |
| 179 | 98·64 | 3 | 67 27 30·5 | −15·275 | +0·331 | | | 5134 | | | | 903 | +22 392 | 179 |
| 180 | 98·58 | 3 | 72 7 57·5 | −15·195 | +0·326 | +0·021 | 393 | 5184 | | | 664 | 911 | +17 442 | 180 |

140. Authority for Proper Motions: Boss.

146. Authority for Proper Motions: Porter.

| No. | Constellation. | Magnitude. | Number of Estimations. | Mean Year and Fraction of Year. | Number of Observations. | Mean R.A. | Precess. | Sec. Var. | Proper Motion. | No. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | h. m. s. | s. | s. | s. | |
| 181 | 42 Arietis ... ... $\pi$ | 5·2 | ... | 97·99 | 3 | 2 43 42·58 | +3·3413 | +0·0163 | −0·0011 | 181 |
| 182 | Ceti ... ... ... ... | 7·3 | 2 | 99·01 | 3 | 2 44 29·27 | +3·0805 | +0·0085 | | 182 |
| 183 | 43 Arietis ... ... $\sigma$ | 5·7 | 1 | 99·27 | 8 | 2 45 58·15 | +3·3046 | +0·0150 | −0·0002 | 183 |
| 184 | Ceti ... ... ... ... | 7·5 | 1 | 99·00 | 3 | 2 46 9·99 | +3·1000 | +0·0090 | | 184 |
| 185 | Ceti ... ... ... ... | 7·3 | 1 | 99·05 | 3 | 2 48 28·29 | +3·0972 | +0·0090 | −0·0040 | 185 |
| 186 | Ceti ... ... ... ... | 8·0 | 1 | 02·02 | 3 | 2 48 57·58 | +3·1457 | +0·0102 | | 186 |
| 187 | Ceti ... ... ... ... | 7·3 | 1 | 99·07 | 3 | 2 49 55·37 | +3·1213 | +0·0096 | | 187 |
| 188 | 45 Arietis ... ... $\rho^2$ | 6·0 | ... | 97·98 | 3 | 2 50 11·24 | +3·3652 | +0·0167 | −0·0022 | 188 |
| 189 | Ceti ... ... ... ... | 7·0 | 3 | 99·04 | 3 | 2 50 21·26 | +3·0982 | +0·0090 | | 189 |
| 190 | 46 Arietis ... ... $\rho^3$ | 5·7 | ... | 97·95 | 3 | 2 50 47·30 | +3·3607 | +0·0165 | +0·0186 | 190 |
| 191 | Ceti ... ... ... ... | 6·3 | ... | 99·04 | 3 | 2 51 50·12 | +3·1380 | +0·0100 | | 191 |
| 192 | Ceti ... ... ... ... | 7·3 | 2 | 02·92 | 3 | 2 52 2·37 | +3·0734 | +0·0084 | | 192 |
| 193 | Persei ... ... ... ... | 9·2 | 1 | 00·21 | 4 | 2 52 5·99 | +4·3873 | +0·0662 | | 193 |
| 194 | 47 Arietis ... ... ... | 5·8 | ... | 98·31 | 3 | 2 52 21·60 | +3·4099 | +0·0181 | +0·0147 | 194 |
| 195 | 48 Arietis ... ... $\epsilon$ | 4·6 | ... | 00·37 | 5 | 2 53 29·46 | +3·4241 | +0·0184 | −0·0025 | 195 |
| 196 | Ceti ... ... ... ... | 6·3 | ... | 99·03 | 3 | 2 56 36·22 | +3·1531 | +0·0103 | | 196 |
| 197 | 92 Ceti ... ... ... $a$ | 2·9 | ... | 98·61 | 10 | 2 57 3·01 | +3·1330 | +0·0098 | −0·0029 | 197 |
| 198 | 93 Ceti ... ... ... ... | 6·5 | 1 | 99·00 | 3 | 2 57 8·16 | +3·1372 | +0·0099 | −0·0016 | 198 |
| 199 | Arietis ... ... ... | 6·5 | ... | 97·95 | 3 | 2 59 6·69 | +3·3333 | +0·0152 | −0·0026 | 199 |
| 200 | Ceti ... ... ... ... | 6·1 | ... | 98·98 | 3 | 2 59 27·74 | +3·0970 | +0·0089 | | 200 |
| 201 | Arietis ... ... ... | 5·8 | ... | 97·97 | 3 | 3 0 54·16 | +3·2884 | +0·0138 | | 201 |
| 202 | 54 Arietis ... ... ... | 6·5 | ... | 97·98 | 3 | 3 2 40·86 | +3·3910 | +0·0166 | −0·0005 | 202 |
| 203 | Ceti ... ... ... ... | 6·9 | ... | 98·98 | 3 | 3 5 44·44 | +3·1055 | +0·0091 | | 203 |
| 204 | Arietis ... ... ... | 6·6 | ... | 98·28 | 3 | 3 5 52·28 | +3·2906 | +0·0136 | | 204 |
| 205 | 57 Arietis ... ... $\delta$ | 4·5 | ... | 97·98 | 8 | 3 5 54·47 | +3·4131 | +0·0171 | +0·0095 | 205 |
| 206 | Ceti ... ... ... ... | 8·0 | 1 | 02·90 | 3 | 3 6 19·29 | +3·1465 | +0·0100 | | 206 |
| 207 | Ceti ... ... ... ... | 8·2* | ... | 02·00 | 3 | 3 8 54·08 | +3·0790 | +0·0085 | | 207 |
| 208 | Ceti ... ... ... ... | 9·0* | ... | 02·34 | 3 | 3 9 7·27 | +3·1108 | +0·0092 | | 208 |
| 209 | 58 Arietis ... ... $\zeta$ | 5·0 | 1 | 99·74 | 5 | 3 9 9·04 | +3·4434 | +0·0177 | −0·0032 | 209 |
| 210 | Persei ... ... ... ... | 9·0 | 2 | 02·95 | 3 | 3 12 55·11 | +3·7866 | +0·0289 | | 210 |
| 211 | 96 Ceti ... ... ... $\kappa^1$ | 4·9 | ... | 97·64 | 3 | 3 14 6·88 | +3·1253 | +0·0094 | +0·0164 | 211 |
| 212 | Ceti ... ... ... ... | 6·8 | ... | 99·00 | 3 | 3 14 52·16 | +3·0923 | +0·0087 | | 212 |
| 213 | 61 Arietis ... ... $\tau^1$ | 5·1 | ... | 98·81 | 12 | 3 15 27·08 | +3·4549 | +0·0175 | +0·0008 | 213 |
| 214 | 97 Ceti ... ... ... $\kappa^2$ | 6·7 | 1 | 99·01 | 3 | 3 15 52·84 | +3·1312 | +0·0095 | +0·0027 | 214 |
| 215 | 63 Arietis ... ... $\tau^2$ | 5·2 | ... | 97·34 | 3 | 3 16 59·78 | +3·4490 | +0·0172 | −0·0043 | 215 |
| 216 | 33 Persei ... ... ... $a$ | 1·9 | ... | 01·78 | 3 | 3 17 10·76 | +4·2595 | +0·0483 | +0·0015 | 216 |
| 217 | Ceti ... ... ... ... | 7·0 | 1 | 99·07 | 3 | 3 18 23·23 | +3·1533 | +0·0099 | | 217 |
| 218 | 64 Arietis ... ... ... | 5·9 | 1 | 98·34 | 3 | 3 18 23·99 | +3·5339 | +0·0195 | −0·0004 | 218 |
| 219 | Ceti ... ... ... ... | 7·0 | 1 | 99·04 | 3 | 3 18 27·62 | +3·0826 | +0·0085 | | 219 |
| 220 | Tauri ... ... ... ... | 6·2 | ... | 98·62 | 3 | 3 18 39·86 | +3·2944 | +0·0130 | | 220 |
| 221 | 65 Arietis ... ... ... | 6·0 | ... | 98·29 | 3 | 3 18 40·00 | +3·4527 | +0·0171 | −0·0003 | 221 |
| 222 | 1 Tauri ... ... ... $o$ | 3·8 | ... | 98·68 | 8 | 3 19 25·78 | +3·2287 | +0·0115 | −0·0052 | 222 |
| 223 | Arietis ... ... ... | 6·5 | 1 | 96·68 | 3 | 3 21 20·59 | +3·4152 | +0·0159 | | 223 |
| 224 | Tauri ... ... ... ... | 7·4 | ... | 02·06 | 3 | 3 22 2·47 | +3·1075 | +0·0089 | | 224 |
| 225 | 66 Arietis ... ... ... | 6·1 | ... | 98·00 | 3 | 3 22 35·66 | +3·5000 | +0·0181 | −0·0008 | 225 |

181. A faint companion follows south. 183. Greenish-blue. 193. A star (BD + 55° 727), magnitude 8·8, precedes $2^m$ $3^s$, and is of nearly same N.P.D. 197. Orange-red. 216. Yellow.

| No. | Mean Year and Fraction of Year. | Number of Observations. | Mean N.P.D. | Precess. | Sec. Var. | Proper Motion. | Auwers' Bradley, 1755. | Lalande, 1800. | Weisse's Bessel (1), 1825. | Albany (A. G.), 1875. | Radcliffe, 1890. | Greenwich, 1890. | B.D. | No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ° ′ ″ | ″ | ″ | ″ | | | | | | | ° | |
| 181 | 97·99 | 3 | 72 57 5·4 | −15·151 | +0·326 | −0·001 | 397 | 5209 | | | | 918 | +16 355 | 181 |
| 182 | 99·01 | 3 | 89 29 37·1 | −15·106 | +0·302 | | | 5246 | 723 | | 673 | | + 0 469 | 182 |
| 183 | 98·96 | 3 | 75 19 46·7 | −15·020 | +0·326 | +0·039 | 400 | 5280 | 744 | | 676 | 932 | +14 480 | 183 |
| 184 | 99·00 | 3 | 88 14 21·2 | −15·009 | +0·306 | | | | | 797 | | | + 1 503 | 184 |
| 185 | 99·05 | 3 | 88 26 7·1 | −14·874 | +0·309 | +0·180 | | 5353 | 795 | 811 | | | + 1 509 | 185 |
| 186 | 02·02 | 3 | 85 21 32·8 | −14·845 | +0·315 | | | 5370 | 806 | 816 | | | + 4 458 | 186 |
| 187 | 99·07 | 3 | 86 55 8·7 | −14·789 | +0·314 | | | 5406 | 823 | 824 | | | + 2 450 | 187 |
| 188 | 97·98 | 3 | 72 4 24·3 | −14·773 | +0·338 | +0·005 | 406 | 5400 | | | 694 | 947 | +17 457 | 188 |
| 189 | 99·04 | 3 | 88 23 14·4 | −14·763 | +0·312 | | | 5418 | 835 | 827 | | | + 1 512 | 189 |
| 190 | 97·95 | 3 | 72 22 32·4 | −14·738 | +0·339 | +0·189 | 408 | 5412 | | | | 948 | +17 458 | 190 |
| 191 | 99·04 | 3 | 85 54 9·8 | −14·675 | +0·318 | | | | 864 | 837 | | | + 3 410 | 191 |
| 192 | 02·92 | 3 | 89 57 17·1 | −14·663 | +0·312 | | | 5464 | 872 | | 702 | | − 0 460 | 192 |
| 193 | 97·62 | 3 | 34 45 12·3 | −14·659 | +0·443 | | | | | | | | +55 732 | 193 |
| 194 | 98·31 | 3 | 69 43 55·9 | −14·643 | +0·346 | +0·004 | 412 | 5453 | | | | 957 | +20 480 | 194 |
| 195 | 02·31 | 3 | 69 3 33·8 | −14·576 | +0·349 | +0·006 | 415 | 5486 | | | 707 | 959 | +20 484 | 195 |
| 196 | 99·03 | 3 | 85 3 33·9 | −14·388 | +0·327 | | | 5592 | 957 | 857 | | | + 4 485 | 196 |
| 197 | 99·02 | 3 | 86 18 8·9 | −14·360 | +0·325 | +0·073 | 428 | 5613 | 963 | 860 | 722 | 965 | + 3 419 | 197 |
| 198 | 99·00 | 3 | 86 2 29·7 | −14·355 | +0·326 | −0·012 | 430 | 5617 | 965 | 861 | | | + 3 420 | 198 |
| 199 | 97·95 | 3 | 74 31 54·8 | −14·234 | +0·349 | +0·099 | | 5671 | 995 | | | 970 | +15 430 | 199 |
| 200 | 98·98 | 3 | 88 31 35·8 | −14·212 | +0·325 | | | 5694 | 1008 | 871 | | | + 1 534 | 200 |
| 201 | 97·97 | 3 | 77 11 54·2 | −14·123 | +0·347 | | | 5724 | 1033 | | | | +12 436 | 201 |
| 202 | 97·98 | 3 | 71 35 18·4 | −14·012 | +0·360 | +0·008 | 440 | 5773 | | | | 982 | +18 414 | 202 |
| 203 | 98·98 | 3 | 88 3 45·7 | −13·819 | +0·334 | | | 5897 | 38 | 914 | | | + 1 561 | 203 |
| 204 | 98·28 | 3 | 77 19 52·2 | −13·811 | +0·354 | | | 5893 | 36 | | 748 | 995 | +12 452 | 204 |
| 205 | 99·76 | 5 | 70 39 5·0 | −13·809 | +0·367 | −0·005 | 446 | 5884 | | | 749 | 996 | +19 477 | 205 |
| 206 | 02·90 | 3 | 85 39 16·1 | −13·782 | +0·339 | | | 5914 | 46 | 916 | | | + 4 507 | 206 |
| 207 | 02·00 | 3 | 89 38 1·9 | −13·618 | +0·335 | | | 5990 | 106 | | | | + 0 542 | 207 |
| 208 | 02·34 | 3 | 87 46 40·6 | −13·604 | +0·339 | | | | 109 | 930 | | | + 2 500 | 208 |
| 209 | 97·57 | 3 | 69 19 33·8 | −13·602 | +0·375 | +0·070 | 451 | 5983 | | | 764 | 1009 | +20 527 | 209 |
| 210 | 02·95 | 3 | 54 23 44·2 | −13·358 | +0·418 | | | | | | | | +35 665 | 210 |
| 211 | 97·64 | 3 | 86 59 46·9 | −13·279 | +0·347 | −0·110 | 463 | 6136 | | 957 | 783 | 1019 | + 2 518 | 211 |
| 212 | 99·00 | 3 | 88 52 45·8 | −13·230 | +0·345 | | | 6166 | 222 | 963 | | | + 0 567 | 212 |
| 213 | 00·65 | 3 | 69 12 47·6 | −13·192 | +0·385 | +0·030 | 465 | | | | 787 | 1026 | +20 543 | 213 |
| 214 | 99·01 | 3 | 86 41 4·0 | −13·163 | +0·350 | +0·037 | 468 | 6191 | 238 | 967 | | | + 3 461 | 214 |
| 215 | 97·34 | 3 | 69 36 55·7 | −13·089 | +0·387 | +0·007 | 470 | 6214 | | | | 1030 | +20 551 | 215 |
| 216 | 03·15 | 3 | 40 29 39·7 | −13·077 | +0·477 | +0·033 | 464 | | | | 788 | 1031 | +49 917 | 216 |
| 217 | 99·07 | 3 | 85 28 25·3 | −12·997 | +0·356 | | | 6267 | 274 | 977 | | | + 4 532 | 217 |
| 218 | 98·34 | 3 | 65 37 47·5 | −12·996 | +0·398 | +0·046 | 472 | 6245 | | | | 1038 | +24 481 | 218 |
| 219 | 99·04 | 3 | 89 26 35·4 | −12·992 | +0·348 | | | 6270 | 277 | | | | + 0 581 | 219 |
| 220 | 98·62 | 3 | 77 43 30·3 | −12·978 | +0·372 | | | 6268 | 275 | | | | +12 473 | 220 |
| 221 | 98·29 | 3 | 69 33 4·8 | −12·978 | +0·389 | −0·001 | 474 | 6257 | | | 799 | 1040 | +20 556 | 221 |
| 222 | 01·98 | 3 | 81 19 22·4 | −12·927 | +0·366 | +0·068 | 477 | 6287 | 294 | | 802 | 1042 | + 8 511 | 222 |
| 223 | 96·68 | 3 | 71 35 36·1 | −12·799 | +0·389 | | | 6341 | | | | 1056 | +18 484 | 223 |
| 224 | 02·06 | 3 | 88 4 5·2 | −12·752 | +0·355 | | | 6377 | 342 | 993 | | | + 1 597 | 224 |
| 225 | 98·00 | 3 | 67 32 25·6 | −12·715 | +0·400 | +0·120 | 482 | 6374 | | | | 1065 | +22 495 | 225 |

185. Authority for Proper Motions: Porter.

199. Authority for Proper Motions: Auwers (Berlin A).

| No. | Constellation. | Magnitude. | Number of Estimations. | Mean Year and Fraction of Year. | Number of Observations. | Mean R.A. | Precess. | Sec. Var. | Proper Motion. | No. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | h. m. s. | s. | s. | s. | |
| 226 | Tauri ... ... ... ... | 6·5 | ... | 97·63 | 3 | 3 23 50·84 | +3·1254 | +0·0092 | | 226 |
| 227 | Persei ... ... ... ... | Var. | 3 | 01·50 | 7 | 3 24 23·99 | +4·0621 | +0·0372 | | 227 |
| 228 | 5 Tauri ... ... ... *f* | 4·3 | ... | 99·78 | 9 | 3 25 21·02 | +3·3059 | +0·0129 | −0·0002 | 228 |
| 229 | Tauri ... ... ... ... | 7·7* | ... | 98·98 | 3 | 3 25 29·53 | +3·1646 | +0·0099 | | 229 |
| 230 | Tauri ... ... ... ... | 7·2 | ... | 97·32 | 3 | 3 25 40·04 | +3·4042 | +0·0153 | | 230 |
| 231 | 18 Eridani ... ... $\epsilon$ | 3·9 | ... | 99·31 | 16 | 3 28 13·04 | +2·8907 | +0·0055 | −0·0675 | 231 |
| 232 | 7 Tauri ... ... ... ... | 6·0 | ... | 97·93 | 3 | 3 28 31·09 | +3·5454 | +0·0187 | 0·0000 | 232 |
| 233 | Tauri ... ... ... ... | 6·1 | ... | 98·95 | 3 | 3 31 39·30 | +3·0773 | +0·0082 | −0·0014 | 233 |
| 234 | 10 Tauri ... ... ... ... | 4·4 | ... | 02·06 | 3 | 3 31 46·07 | +3·0743 | +0·0082 | −0·0159 | 234 |
| 235 | Tauri ... ... ... ... | 6·5 | ... | 97·33 | 3 | 3 33 11·74 | +3·4754 | +0·0164 | | 235 |
| 236 | Tauri ... ... ... ... | 7·7 | 1 | 99·00 | 3 | 3 33 42·61 | +3·1184 | +0·0089 | | 236 |
| 237 | Tauri ... ... ... ... | 6·3 | 1 | 97·33 | 3 | 3 33 46·28 | +3·3849 | +0·0142 | +0·0009 | 237 |
| 238 | 12 Tauri ... ... ... ... | 5·7 | ... | 98·34 | 3 | 3 34 38·50 | +3·1241 | +0·0090 | −0·0060 | 238 |
| 239 | 11 Tauri ... ... ... ... | 6·5 | 1 | 01·71 | 6 | 3 34 47·77 | +3·5752 | +0·0188 | −0·0002 | 239 |
| 240 | Tauri ... ... ... ... | 6·7 | ... | 99·07 | 3 | 3 35 11·15 | +3·1634 | +0·0096 | | 240 |
| 241 | 13 Tauri ... ... ... ... | 5·6 | ... | 98·33 | 3 | 3 36 32·76 | +3·4538 | +0·0156 | −0·0013 | 241 |
| 242 | Persei ... ... ... ... | 8·1 | 1 | 99·11 | 3 | 3 37 45·23 | +4·1879 | +0·0383 | +0·0310 | 242 |
| 243 | 14 Tauri ... ... ... ... | 6·2 | ... | 98·63 | 3 | 3 38 0·15 | +3·4549 | +0·0155 | +0·0073 | 243 |
| 244 | 23 Eridani ... ... $\delta$ | 3·7 | ... | 01·03 | 3 | 3 38 27·38 | +2·8785 | +0·0054 | −0·0081 | 244 |
| 245 | Tauri ... ... ... ... | 6·1 | ... | 98·62 | 3 | 3 38 38·92 | +3·4829 | +0·0161 | | 245 |
| 246 | 16 Tauri ... ... ... ... | 5·4 | ... | 98·72 | 3 | 3 38 51·38 | +3·5580 | +0·0179 | +0·0006 | 246 |
| 247 | 17 Tauri ... ... ... ... | 3·8 | ... | 98·72 | 3 | 3 38 56·09 | +3·5541 | +0·0178 | −0·0001 | 247 |
| 248 | 18 Tauri ... ... ... ... | 5·6 | ... | 99·11 | 3 | 3 39 11·62 | +3·5711 | +0·0182 | −0·0011 | 248 |
| 249 | 19 Tauri ... ... ... ... | 4·3 | ... | 99·06 | 3 | 3 39 15·22 | +3·5626 | +0·0180 | −0·0008 | 249 |
| 250 | Tauri ... ... ... ... | 6·7 | ... | 98·38 | 3 | 3 39 50·57 | +3·1168 | +0·0087 | | 250 |
| 251 | 20 Tauri ... ... ... ... | 4·1 | ... | 98·08 | 3 | 3 39 52·43 | +3·5613 | +0·0179 | +0·0003 | 251 |
| 252 | Tauri ... ... ... ... | 8·0 | 2 | 02·65 | 3 | 3 40 21·25 | +3·1287 | +0·0089 | | 252 |
| 253 | 23 Tauri ... ... ... ... | 4·3 | ... | 98·63 | 3 | 3 40 23·29 | +3·5525 | +0·0176 | −0·0005 | 253 |
| 254 | 25 Tauri ... ... ... $\eta$ | 2·9 | ... | 00·38 | 5 | 3 41 32·24 | +3·5579 | +0·0176 | −0·0004 | 254 |
| 255 | 27 Tauri ... ... ... ... | 3·7 | ... | 98·33 | 3 | 3 43 12·82 | +3·5592 | +0·0175 | −0·0003 | 255 |
| 256 | 28 Tauri ... ... ... ... | 5·2 | ... | 98·66 | 3 | 3 43 14·05 | +3·5611 | +0·0175 | −0·0013 | 256 |
| 257 | Eridani ... ... ... | 6·5 | 1 | 02·05 | 3 | 3 43 31·03 | +3·0712 | +0·0079 | | 257 |
| 258 | Tauri ... ... ... ... | 6·9 | 1 | 98·70 | 3 | 3 44 2·23 | +3·5192 | +0·0164 | | 258 |
| 259 | Tauri ... ... ... ... | 5·3 | ... | 98·62 | 3 | 3 44 18·07 | +3·5965 | +0·0182 | +0·0029 | 259 |
| 260 | Eridani ... ... ... | 8·5 | 1 | 99·06 | 3 | 3 44 24·11 | +3·0933 | +0·0082 | +0·0110 | 260 |
| 261 | Eridani ... ... ... | 7·0 | 1 | 99·11 | 3 | 3 45 31·90 | +3·0972 | +0·0083 | | 261 |
| 262 | Tauri ... ... ... ... | 6·8 | ... | 97·67 | 3 | 3 45 44·05 | +3·5167 | +0·0162 | | 262 |
| 263 | Tauri ... ... ... ... | 6·0 | 1 | 97·63 | 3 | 3 47 26·75 | +3·4156 | +0·0138 | +0·0100 | 263 |
| 264 | Eridani ... ... ... | 6·7 | 1 | 00·08 | 3 | 3 48 18·76 | +3·1084 | +0·0083 | | 264 |
| 265 | Tauri ... ... ... ... | 7·8 | 1 | 02·26 | 4 | 3 49 9·84 | +3·1688 | +0·0092 | | 265 |
| 266 | Tauri ... ... ... ... | 7·0 | 2 | 99·05 | 3 | 3 49 31·19 | +3·1080 | +0·0083 | | 266 |
| 267 | 32 Tauri ... ... ... ... | 5·8 | ... | 97·60 | 3 | 3 50 57·38 | +3·5338 | +0·0160 | +0·0038 | 267 |
| 268 | Tauri ... ... ... ... | 7·0 | 1 | 00·06 | 3 | 3 51 24·28 | +3·1274 | +0·0085 | | 268 |
| 269 | Eridani ... ... ... | 7·5 | 1 | 99·13 | 3 | 3 53 11·34 | +3·0957 | +0·0080 | | 269 |
| 270 | 34 Eridani ... ... $\gamma^1$ | 3·4 | ... | 99·87 | 17 | 3 53 21·73 | +2·7934 | +0·0047 | +0·0029 | 270 |

227. Anderson's Nova Persei. (For Radcliffe observations of magnitude and colour, *vide* Monthly Notices R.A.S., lxi. and later volumes.) 231. Orange. 233. Double. Faint companion precedes. 249. Green. 265. A star (Albany 1137), magnitude 9, is of nearly same R.A. and about 1′ north. 269. Reddish. 270. Orange-red.

| No. | Mean Year and Fraction of Year. | Number of Observations. | Mean N.P.D. | Precess. | Sec. Var. | Proper Motion. | Auwers' Bradley, 1755. | Lalande, 1800. | Weisse's Bessel (1), 1825. | Albany (A. G.), 1875. | Radcliffe, 1890. | Greenwich, 1890. | B.D. | No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ° ′ ″ | ″ | ″ | ″ | | | | | | | ° | |
| 226 | 97·63 | 3 | 87 5 50·4 | −12·629 | +0·359 | | | 6424 | 376 | 1003 | | | +2 552 | 226 |
| 227 | 01·50 | 7 | 46 26 17·5 | −12·592 | +0·466 | | | | | | | | | 227 |
| 228 | 99·71 | 3 | 77 24 20·6 | −12·527 | +0·382 | −0·011 | 486 | 6461 | | | 822 | 1086 | +12 486 | 228 |
| 229 | 98·98 | 3 | 84 58 31·0 | −12·518 | +0·366 | | | 6479 | 405 | 1008 | | | +4 543 | 229 |
| 230 | 97·32 | 3 | 72 24 12·5 | −12·506 | +0·393 | | | | | | | 1089 | +17 564 | 230 |
| 231 | 01·79 | 5 | 99 47 48·0 | −12·330 | +0·338 | −0·011 | 493 | 6581 | 470 | | 831 | 1097 | −9 697 | 231 |
| 232 | 97·93 | 3 | 65 52 15·1 | −12·310 | +0·413 | +0·035 | 491 | 6559 | | | | 1099 | +23 473 | 232 |
| 233 | 98·95 | 3 | 89 44 19·0 | −12·092 | +0·363 | +0·160 | 496 | 6663 | 541 | | 842 | | +0 616 | 233 |
| 234 | 02·06 | 3 | 89 54 54·6 | −12·084 | +0·363 | +0·501 | 497 | 6665 | 542 | | 843 | 1113 | −0 572 | 234 |
| 235 | 97·33 | 3 | 69 24 36·8 | −11·984 | +0·411 | | | 6686 | | | | | +20 602 | 235 |
| 236 | 99·00 | 3 | 87 33 46·1 | −11·948 | +0·370 | | | 6719 | 580 | 1057 | | | +2 577 | 236 |
| 237 | 97·33 | 3 | 73 47 18·3 | −11·944 | +0·402 | +0·018 | | 6705 | | | 849 | 1120 | +16 484 | 237 |
| 238 | 98·34 | 3 | 87 16 5·4 | −11·882 | +0·372 | −0·019 | 503 | 6744 | 601 | 1064 | | | +2 581 | 238 |
| 239 | 01·99 | 3 | 64 59 37·3 | −11·871 | +0·425 | +0·011 | 500 | 6732 | | | 854 | 1126 | +24 529 | 239 |
| 240 | 99·07 | 3 | 85 11 50·8 | −11·844 | +0·377 | | | 6765 | | 1066 | | | +4 571 | 240 |
| 241 | 98·33 | 3 | 70 37 11·6 | −11·748 | +0·413 | +0·007 | 504 | 6795 | | | 867 | 1133 | +19 578 | 241 |
| 242 | 99·11 | 3 | 44 16 40·6 | −11·663 | +0·502 | +0·120 | | 6793 | | | | | +45 805 | 242 |
| 243 | 98·63 | 3 | 70 39 3·7 | −11·644 | +0·415 | +0·034 | 507 | 6855 | | | | 1138 | +19 582 | 243 |
| 244 | 02·04 | 3 | 100 6 5·7 | −11·612 | +0·347 | −0·743 | 515 | 6899 | 687 | | 873 | 1141 | −10 728 | 244 |
| 245 | 98·62 | 3 | 69 23 13·3 | −11·598 | +0·419 | | | 6873 | | | | 1142 | +20 621 | 245 |
| 246 | 98·72 | 3 | 66 1 29·4 | −11·583 | +0·429 | +0·055 | 508 | 6875 | | | | 1145 | +23 505 | 246 |
| 247 | 98·72 | 3 | 66 12 3·1 | −11·578 | +0·428 | +0·036 | 509 | 6877 | | | | 1149 | +23 507 | 247 |
| 248 | 99·11 | 3 | 65 28 27·7 | −11·559 | +0·431 | +0·050 | 510 | 6883 | | | | 1151 | +24 546 | 248 |
| 249 | 99·06 | 3 | 65 50 46·7 | −11·555 | +0·430 | +0·039 | 511 | | | | | 1152 | +24 547 | 249 |
| 250 | 98·38 | 3 | 87 41 29·7 | −11·513 | +0·377 | | | 6932 | 713 | 1100 | | | +2 602 | 250 |
| 251 | 98·08 | 3 | 65 56 40·7 | −11·511 | +0·430 | +0·036 | 512 | 6911 | | | | 1156 | +23 516 | 251 |
| 252 | 02·65 | 3 | 87 4 25·6 | −11·476 | +0·379 | | | 6944 | 728 | 1104 | | | +2 603 | 252 |
| 253 | 98·63 | 3 | 66 21 46·9 | −11·474 | +0·430 | +0·042 | 516 | 6927 | | | | 1165 | +23 522 | 253 |
| 254 | 02·76 | 5 | 66 12 14·0 | −11·391 | +0·432 | +0·040 | 521 | 6965 | | | 885 | 1174 | +23 541 | 254 |
| 255 | 98·33 | 3 | 66 15 7·5 | −11·270 | +0·434 | +0·047 | 527 | 7006 | | | | 1181 | +23 557 | 255 |
| 256 | 98·66 | 3 | 66 10 7·1 | −11·268 | +0·434 | +0·057 | 528 | 7007 | | | | 1182 | +23 558 | 256 |
| 257 | 02·05 | 3 | 90 4 44·8 | −11·248 | +0·376 | | | 7051 | 790 | | 892 | | −0 602 | 257 |
| 258 | 98·70 | 3 | 68 3 35·6 | −11·210 | +0·430 | | | | | | | | +21 535 | 258 |
| 259 | 98·62 | 3 | 64 43 20·0 | −11·191 | +0·440 | +0·117 | | 7050 | | | | | +25 624 | 259 |
| 260 | 99·06 | 3 | 88 56 23·7 | −11·184 | +0·379 | +0·590 | | | 811 | 1120 | | | +0 659 | 260 |
| 261 | 99·11 | 3 | 88 44 21·4 | −11·102 | +0·381 | | | 7122 | 836 | 1124 | | | +1 667 | 261 |
| 262 | 97·67 | 3 | 68 16 10·7 | −11·087 | +0·432 | | | 7102 | | | | | +21 539 | 262 |
| 263 | 97·63 | 3 | 72 58 13·5 | −10·962 | +0·422 | +0·020 | | 7153 | | | 905 | 1198 | +16 523 | 263 |
| 264 | 00·08 | 3 | 88 10 39·1 | −10·898 | +0·385 | | | 7195 | 888 | 1133 | | | +1 673 | 264 |
| 265 | 02·39 | 5 | 85 7 12·3 | −10·836 | +0·394 | | | 7212 | 900 | 1138 | | | +4 601 | 265 |
| 266 | 99·05 | 3 | 88 12 19·2 | −10·809 | +0·386 | | | 7228 | 915 | 1144 | | | +1 679 | 266 |
| 267 | 97·60 | 3 | 67 48 36·3 | −10·703 | +0·440 | +0·107 | | 7248 | | | 922 | 1213 | +22 605 | 267 |
| 268 | 00·06 | 3 | 87 13 59·6 | −10·670 | +0·391 | | | | 943 | 1151 | | | +2 628 | 268 |
| 269 | 99·13 | 3 | 88 50 29·0 | −10·538 | +0·389 | | | 7356 | 991 | 1158 | | | +1 685 | 269 |
| 270 | 00·64 | 3 | 103 47 34·7 | −10·525 | +0·351 | +0·106 | 546 | 7376 | 1009 | | 934 | 1224 | −13 781 | 270 |

237. Authority for Proper Motions: Auwers (Berlin A). 242, 260. The Proper Motions have been specially computed for the present catalogue. 259. Authority for Proper Motions: Porter. 263, 267. Authority for Proper Motions: Auwers (Mayer's Sternverzeichnis).

| No. | Constellation. | Magnitude. | Number of Estimations. | Mean Year and Fraction of Year. | Number of Observations. | Mean R.A. | Precess. | Sec. Var. | Proper Motion. | No. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | h. m. s. | s. | s. | s. | |
| 271 | Eridani ... ... ... | 7·7 | 2 | 99·05 | 3 | 3 54 30·79 | +3·1028 | +0·0081 | | 271 |
| 272 | Tauri ... ... ... ... | 6·3 | 1 | 98·00 | 3 | 3 54 53·99 | +3·4223 | +0·0133 | −0·0016 | 272 |
| 273 | Tauri ... ... ... ... | 5·8 | ... | 98·33 | 3 | 3 55 2·93 | +3·4421 | +0·0137 | +0·0078 | 273 |
| 274 | Tauri ... ... ... ... | 6·9 | ... | 98·01 | 3 | 3 55 17·34 | +3·4872 | +0·0146 | −0·0009 | 274 |
| 275 | Tauri ... ... ... ... | 7·3 | 1 | 99·10 | 3 | 3 57 14·34 | +3·1444 | +0·0086 | | 275 |
| 276 | Tauri ... ... ... ... | 7·1 | ... | 01·04 | 3 | 3 58 5·81 | +3·1291 | +0·0083 | | 276 |
| 277 | Tauri ... ... ... ... | 7·4 | ... | 01·03 | 3 | 3 58 7·67 | +3·1313 | +0·0084 | | 277 |
| 278 | 36 Tauri ... ... ... ... | 5·6 | ... | 98·67 | 3 | 3 58 22·67 | +3·5820 | +0·0162 | −0·0005 | 278 |
| 279 | 40 Tauri ... ... ... ... | 6·0 | 1 | 00·09 | 3 | 3 58 26·51 | +3·1768 | +0·0090 | −0·0033 | 279 |
| 280 | 37 Tauri ... ... ... $A^1$ | 4·5 | ... | 99·19 | 14 | 3 58 46·84 | +3·5345 | +0·0152 | +0·0053 | 280 |
| 281 | Tauri ... ... ... ... | 6·8 | ... | 98·63 | 3 | 3 58 56·10 | +3·4310 | +0·0132 | | 281 |
| 282 | Tauri ... ... ... ... | 5·4 | ... | 98·43 | 3 | 3 58 56·13 | +3·1243 | +0·0082 | +0·0110 | 282 |
| 283 | 39 Tauri ... ... ... $A^2$ | 6·1 | ... | 98·70 | 3 | 3 59 24·87 | +3·5337 | +0·0151 | +0·0122 | 283 |
| 284 | 41 Tauri ... ... ... ... | 5·3 | ... | 99·04 | 3 | 4 0 28·18 | +3·6717 | +0·0180 | +0·0009 | 284 |
| 285 | Tauri ... ... ... ... | 6·5 | 1 | 98·41 | 3 | 4 2 2·23 | +3·3822 | +0·0120 | | 285 |
| 286 | Tauri ... ... ... ... | 6·0 | 1 | 97·69 | 3 | 4 2 15·71 | +3·4303 | +0·0129 | −0·0004 | 286 |
| 287 | 43 Tauri ... ... ... $\omega^1$ | 5·5 | ... | 99·07 | 8 | 4 3 20·30 | +3·4825 | +0·0137 | +0·0061 | 287 |
| 288 | Tauri ... ... ... ... | 8·2* | ... | 02·07 | 3 | 4 3 33·20 | +3·0833 | +0·0076 | | 288 |
| 289 | Tauri ... ... ... ... | 6·5 | ... | 98·40 | 3 | 4 4 29·45 | +3·1353 | +0·0082 | −0·0059 | 289 |
| 290 | 44 Tauri ... ... ... $p$ | 5·5 | ... | 98·72 | 3 | 4 4 44·31 | +3·6495 | +0·0169 | −0·0034 | 290 |
| 291 | Tauri ... ... ... ... | 6·6 | ... | 98·63 | 3 | 4 4 55·14 | +3·4571 | +0·0131 | +0·0050 | 291 |
| 292 | Tauri ... ... ... ... | 8·2* | ... | 99·13 | 3 | 4 5 57·61 | +3·1149 | +0·0079 | | 292 |
| 293 | 45 Tauri ... ... ... ... | 5·7 | ... | 99·14 | 3 | 4 6 0·81 | +3·1810 | +0·0087 | +0·0080 | 293 |
| 294 | Tauri ... ... ... ... | 6·2 | ... | 97·03 | 3 | 4 6 47·18 | +3·4330 | +0·0125 | +0·0020 | 294 |
| 295 | Tauri ... ... ... ... | 6·1 | ... | 98·62 | 3 | 4 6 55·36 | +3·5521 | +0·0147 | | 295 |
| 296 | 38 Eridani ... ... $o^1$ | 4·5 | ... | 99·76 | 9 | 4 6 58·97 | +2·9261 | +0·0058 | −0·0006 | 296 |
| 297 | Tauri ... ... ... ... | 6·7 | ... | 99·09 | 3 | 4 7 0·66 | +3·0825 | +0·0074 | | 297 |
| 298 | 48 Tauri ... ... ... ... | 6·3 | 1 | 97·31 | 3 | 4 10 5·49 | +3·3938 | +0·0116 | +0·0074 | 298 |
| 299 | Tauri ... ... ... ... | 8·2* | ... | 02·05 | 3 | 4 10 11·59 | +3·1507 | +0·0081 | | 299 |
| 300 | 40 Eridani ... ... $o^2$ | 4·5 | ... | 98·40 | 3 | 4 10 40·08 | +2·9099 | +0·0056 | −0·1442 | 300 |
| 301 | Eridani ... ... ... | 9·4 | 3 | 99·07 | 3 | 4 10 45·41 | +2·9097 | +0·0056 | −0·1442 | 301 |
| 302 | 50 Tauri ... ... ... $\omega^2$ | 4·8 | ... | 98·35 | 3 | 4 11 23·92 | +3·5135 | +0·0135 | −0·0039 | 302 |
| 303 | Tauri ... ... ... ... | 7·7* | ... | 99·09 | 3 | 4 12 5·08 | +3·1202 | +0·0077 | | 303 |
| 304 | 51 Tauri ... ... ... ... | 5·6 | ... | 98·03 | 3 | 4 12 27·98 | +3·5385 | +0·0138 | +0·0059 | 304 |
| 305 | 53 Tauri ... ... ... ... | 5·3 | ... | 98·65 | 3 | 4 13 32·31 | +3·5291 | +0·0135 | −0·0002 | 305 |
| 306 | 56 Tauri ... ... ... ... | 5·2 | ... | 97·35 | 3 | 4 13 41·44 | +3·5445 | +0·0138 | +0·0007 | 306 |
| 307 | 54 Tauri ... ... ... $\gamma$ | 3·9 | ... | 99·17 | 9 | 4 14 6·05 | +3·4020 | +0·0114 | +0·0073 | 307 |
| 308 | 52 Tauri ... ... ... $\phi$ | 5·0 | ... | 99·11 | 3 | 4 14 12·13 | +3·6855 | +0·0164 | −0·0019 | 308 |
| 309 | Tauri ... ... ... ... | 6·0 | ... | 99·13 | 3 | 4 14 36·40 | +3·4736 | +0·0125 | | 309 |
| 310 | 58 Tauri ... ... ... ... | 5·4 | ... | 98·77 | 3 | 4 14 55·92 | +3·3907 | +0·0112 | +0·0058 | 310 |
| 311 | Tauri ... ... ... ... | 6·1 | ... | 98·66 | 3 | 4 16 29·64 | +3·5245 | +0·0131 | | 311 |
| 312 | 59 Tauri ... ... ... $\chi$ | 5·3 | ... | 98·10 | 3 | 4 16 29·71 | +3·6437 | +0·0152 | +0·0017 | 312 |
| 313 | Tauri ... ... ... ... | 6·9 | ... | 00·09 | 3 | 4 16 34·03 | +3·1180 | +0·0075 | 0·0000 | 313 |
| 314 | 61 Tauri ... ... ... $\delta^1$ | 3·9 | ... | 98·66 | 3 | 4 17 9·98 | +3·4481 | +0·0118 | +0·0066 | 314 |
| 315 | Tauri ... ... ... ... | 5·9 | ... | 99·14 | 3 | 4 17 38·74 | +3·5295 | +0·0131 | | 315 |

277, 311. Orange-red. 292. Orange.

| No. | Mean Year and Fraction of Year. | Number of Observations. | Mean N.P.D. | Precess. | Sec. Var. | Proper Motion. | Auwers' Bradley, 1755. | Lalande, 1800. | Weisse's Bessel (1), 1825. | Albany (A. G.), 1875. | Radcliffe, 1890. | Greenwich, 1890. | B.D. | No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ° ′ ″ | ″ | ″ | ″ | | | | | | | ° | |
| 271 | 99·05 | 3 | 88 29 22·5 | −10·439 | +0·391 | | | 7397 | 1024 | 1167 | | | +1 689 | 271 |
| 272 | 98·00 | 3 | 72 59 7·5 | −10·410 | +0·431 | −0·011 | | 7392 | | | | 1229 | +16 544 | 272 |
| 273 | 98·33 | 3 | 72 5 15·8 | −10·399 | +0·434 | +0·038 | | 7395 | | | | 1230 | +17 666 | 273 |
| 274 | 98·01 | 3 | 70 4 50·7 | −10·381 | +0·440 | +0·030 | 547 | 7403 | | | | 1232 | +19 643 | 274 |
| 275 | 99·10 | 3 | 86 25 52·7 | −10·234 | +0·399 | | | | 1064 | 1180 | | | +3 552 | 275 |
| 276 | 01·82 | 5 | 87 11 59·3 | −10·170 | +0·398 | | | 7503 | 1082 | 1182 | | | +2 640 | 276 |
| 277 | 01·82 | 5 | 87 5 21·7 | −10·167 | +0·398 | | | 7505 | 1083 | 1183 | | | +2 641 | 277 |
| 278 | 98·67 | 3 | 66 10 8·2 | −10·149 | +0·455 | +0·010 | 552 | 7486 | | | | 1243 | +23 609 | 278 |
| 279 | 00·09 | 3 | 84 50 24·3 | −10·144 | +0·403 | +0·019 | 555 | 7519 | 1088 | 1184 | | | +5 584 | 279 |
| 280 | 98·38 | 5 | 68 11 28·4 | −10·118 | +0·449 | +0·058 | 554 | 7501 | | | 954 | 1248 | +21 585 | 280 |
| 281 | 98·63 | 3 | 72 45 25·3 | −10·107 | +0·436 | | | 7524 | | | | 1250 | +17 676 | 281 |
| 282 | 98·43 | 3 | 87 26 41·5 | −10·107 | +0·398 | +0·160 | | 7540 | 1095 | 1186 | | | +2 645 | 282 |
| 283 | 98·70 | 3 | 68 15 38·9 | −10·070 | +0·450 | +0·115 | 556 | 7531 | | | | 1251 | +21 587 | 283 |
| 284 | 99·04 | 3 | 62 40 9·8 | −9·990 | +0·469 | +0·061 | 558 | 7566 | | | | 1254 | +27 633 | 284 |
| 285 | 98·41 | 3 | 75 6 16·7 | −9·871 | +0·434 | | | | | | | 1266 | +14 657 | 285 |
| 286 | 97·69 | 3 | 72 55 38·3 | −9·854 | +0·440 | +0·016 | | 7649 | | | | 1267 | +16 560 | 286 |
| 287 | 00·33 | 3 | 70 39 18·3 | −9·772 | +0·448 | +0·033 | 562 | 7684 | | | 976 | 1270 | +19 672 | 287 |
| 288 | 02·07 | 3 | 89 28 49·1 | −9·756 | +0·397 | | | 7715 | 1196 | | | | +0 701 | 288 |
| 289 | 98·40 | 3 | 86 56 19·8 | −9·684 | +0·405 | +0·054 | | 7742 | 14 | 1210 | | | +2 655 | 289 |
| 290 | 98·72 | 3 | 63 46 47·5 | −9·665 | +0·471 | +0·037 | 563 | 7717 | | | | 1272 | +26 686 | 290 |
| 291 | 98·63 | 3 | 71 50 15·9 | −9·651 | +0·446 | −0·010 | | 7738 | | | | 1273 | +18 594 | 291 |
| 292 | 99·13 | 3 | 87 56 29·1 | −9·571 | +0·403 | | | 7800 | 50 | 1214 | | | +1 713 | 292 |
| 293 | 99·14 | 3 | 84 44 14·1 | −9·567 | +0·412 | −0·023 | 566 | 7798 | 49 | 1215 | | | +5 601 | 293 |
| 294 | 97·03 | 3 | 72 58 46·9 | −9·508 | +0·445 | +0·040 | | 7813 | | | | 1283 | +16 569 | 294 |
| 295 | 98·62 | 3 | 67 50 36·9 | −9·497 | +0·460 | | | 7811 | | | | 1284 | +22 649 | 295 |
| 296 | 98·71 | 3 | 97 5 53·0 | −9·492 | +0·380 | −0·085 | 568 | 7842 | 76 | | 992 | 1285 | −7 764 | 296 |
| 297 | 99·09 | 3 | 89 31 21·8 | −9·490 | +0·400 | | | | 72 | | | | +0 710 | 297 |
| 298 | 97·31 | 3 | 74 50 57·6 | −9·252 | +0·443 | +0·010 | 572 | 7926 | 130 | | | 1302 | +15 603 | 298 |
| 299 | 02·43 | 5 | 86 14 28·8 | −9·244 | +0·412 | | | 7948 | 142 | 1242 | | | +3 576 | 299 |
| 300 | 98·40 | 3 | 97 48 30·6 | −9·207 | +0·381 | +3·442 | 578 | 7988 | 164 | | 1011 | 1308 | −7 780 | 300 |
| 301 | 99·07 | 3 | 97 48 52·0 | −9·200 | +0·381 | +3·442 | | | 166 | | 1012 | | −7 781 | 301 |
| 302 | 98·35 | 3 | 69 40 2·2 | −9·150 | +0·460 | +0·038 | 575 | 7971 | | | 1014 | 1311 | +20 724 | 302 |
| 303 | 99·09 | 3 | 87 43 1·5 | −9·097 | +0·409 | | | 8020 | 180 | 1256 | | | +2 673 | 303 |
| 304 | 98·03 | 3 | 68 39 54·1 | −9·067 | +0·464 | +0·029 | 576 | 8010 | | | | 1314 | +21 618 | 304 |
| 305 | 98·65 | 3 | 69 5 57·9 | −8·983 | +0·464 | +0·038 | 580 | 8049 | | | | 1321 | +20 733 | 305 |
| 306 | 97·35 | 3 | 68 28 4·5 | −8·971 | +0·466 | +0·033 | 581 | 8052 | | | | 1322 | +21 623 | 306 |
| 307 | 97·74 | 3 | 74 36 48·9 | −8·939 | +0·448 | +0·030 | 583 | 8077 | | | 1025 | 1325 | +15 612 | 307 |
| 308 | 99·11 | 3 | 62 53 17·8 | −8·931 | +0·485 | +0·066 | 582 | 8065 | | | | 1327 | +27 655 | 308 |
| 309 | 99·13 | 3 | 71 29 49·3 | −8·900 | +0·458 | | | | | | | | +18 624 | 309 |
| 310 | 98·77 | 3 | 75 8 39·2 | −8·874 | +0·447 | +0·013 | 586 | 8105 | | | | 1331 | +14 682 | 310 |
| 311 | 98·66 | 3 | 69 24 53·8 | −8·751 | +0·466 | | | 8146 | | | | | +20 744 | 311 |
| 312 | 98·10 | 3 | 64 36 23·5 | −8·751 | +0·482 | +0·028 | 588 | | | | | 1338 | +25 707 | 312 |
| 313 | 00·09 | 3 | 87 50 35·1 | −8·746 | +0·413 | +0·150 | | 8176 | 281 | 1283 | | | +2 692 | 313 |
| 314 | 98·66 | 3 | 72 41 30·5 | −8·698 | +0·457 | +0·025 | 594 | 8178 | | | 1044 | 1347 | +17 712 | 314 |
| 315 | 99·14 | 3 | 69 15 3·3 | −8·661 | +0·468 | | | 8195 | | | | 1350 | +20 751 | 315 |

272, 273, 286, 291, 294. Authority for Proper Motions: Auwers (Berlin A).
282, 313. Authority for Proper Motions: Porter.
289. Authority for Proper Motions: Boss.
301. Authority for Proper Motions: Radcliffe, 1890, 1012.

| No. | Constellation. | Magnitude. | Number of Estimations. | Mean Year and Fraction of Year. | Number of Observations. | Mean R.A. | Precess. | Sec. Var. | Proper Motion. | No. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | h. m. s. | s. | s. | s. | |
| 316 | 63 Tauri ... ... ... ... | 5·7 | ... | 99·04 | 3 | 4 17 40·74 | +3·4309 | +0·0115 | +0·0057 | 316 |
| 317 | 62 Tauri ... ... ... ... | 6·2 | ... | 98·74 | 3 | 4 17 57·91 | +3·6116 | +0·0145 | −0·0002 | 317 |
| 318 | 64 Tauri ... ... ... $\delta^2$ | 4·9 | ... | 98·09 | 3 | 4 18 19·72 | +3·4467 | +0·0117 | +0·0072 | 318 |
| 319 | Tauri ... ... ... ... | 6·0 | ... | 97·95 | 3 | 4 19 7·36 | +3·4848 | +0·0122 | +0·0097 | 319 |
| 320 | 65 Tauri ... ... ... $\kappa^1$ | 4·0 | 1 | 98·37 | 3 | 4 19 24·46 | +3·5632 | +0·0135 | +0·0040 | 320 |
| 321 | 67 Tauri ... ... ... $\kappa^2$ | 5·4 | ... | 98·74 | 3 | 4 19 27·44 | +3·5610 | +0·0134 | +0·0086 | 321 |
| 322 | 68 Tauri ... ... ... $\delta^3$ | 4·0 | 1 | 98·08 | 3 | 4 19 42·15 | +3·4591 | +0·0118 | +0·0065 | 322 |
| 323 | 69 Tauri ... ... ... $\upsilon^1$ | 4·2 | ... | 99·11 | 3 | 4 20 19·35 | +3·5770 | +0·0136 | +0·0068 | 323 |
| 324 | 71 Tauri ... ... ... ... | 4·6 | ... | 98·80 | 3 | 4 20 38·86 | +3·4067 | +0·0109 | +0·0067 | 324 |
| 325 | Tauri ... ... ... ... | 6·5 | ... | 02·07 | 3 | 4 20 44·76 | +3·1607 | +0·0078 | | 325 |
| 326 | Tauri ... ... ... ... | 8·0 | 1 | 02·97 | 3 | 4 20 46·93 | +3·0897 | +0·0070 | | 326 |
| 327 | 73 Tauri ... ... ... $\pi$ | 5·0 | ... | 98·78 | 3 | 4 20 57·31 | +3·3864 | +0·0106 | −0·0008 | 327 |
| 328 | 72 Tauri ... ... ... $\upsilon^2$ | 5·4 | ... | 99·76 | 3 | 4 21 18·52 | +3·5827 | +0·0136 | −0·0010 | 328 |
| 329 | Tauri ... ... ... ... | 6·4 | ... | 02·12 | 3 | 4 21 48·65 | +3·1121 | +0·0072 | | 329 |
| 330 | Tauri ... ... ... ... | 5·8 | ... | 98·09 | 3 | 4 22 4·59 | +3·5494 | +0·0130 | +0·0059 | 330 |
| 331 | 75 Tauri ... ... ... ... | 5·2 | ... | 99·11 | 3 | 4 22 43·33 | +3·4252 | +0·0110 | −0·0004 | 331 |
| 332 | 74 Tauri ... ... ... $\epsilon$ | 3·5 | ... | 97·31 | 6 | 4 22 46·51 | +3·4912 | +0·0120 | +0·0070 | 332 |
| 333 | 77 Tauri ... ... ... $\theta^1$ | 4·2 | ... | 99·13 | 3 | 4 22 51·62 | +3·4162 | +0·0109 | +0·0048 | 333 |
| 334 | Eridani ... ... ... | 6·1 | ... | 01·06 | 3 | 4 22 52·31 | +3·1075 | +0·0071 | | 334 |
| 335 | 78 Tauri ... ... ... $\theta^2$ | 3·6 | ... | 99·12 | 3 | 4 22 57·09 | +3·4141 | +0·0108 | +0·0064 | 335 |
| 336 | Tauri ... ... ... ... | 6·6 | ... | 00·83 | 4 | 4 23 9·18 | +3·6988 | +0·0153 | | 336 |
| 337 | Tauri ... ... ... ... | 6·6 | ... | 99·12 | 3 | 4 23 16·51 | +3·4210 | +0·0109 | +0·0097 | 337 |
| 338 | 44 Eridani ... ... ... | 5·5 | ... | 02·12 | 3 | 4 23 21·89 | +3·0974 | +0·0070 | +0·0002 | 338 |
| 339 | Tauri ... ... ... ... | 6·3 | 1 | 96·08 | 3 | 4 24 6·18 | +3·7198 | +0·0156 | | 339 |
| 340 | 80 Tauri ... ... ... ... | 5·8 | ... | 98·63 | 3 | 4 24 26·40 | +3·4098 | +0·0106 | +0·0050 | 340 |
| 341 | Tauri ... ... ... ... | 4·8 | ... | 98·73 | 3 | 4 24 50·11 | +3·4230 | +0·0108 | +0·0073 | 341 |
| 342 | 81 Tauri ... ... ... ... | 5·5 | ... | 98·74 | 3 | 4 24 56·54 | +3·4114 | +0·0106 | +0·0069 | 342 |
| 343 | 85 Tauri ... ... ... ... | 6·5 | 1 | 98·37 | 3 | 4 26 8·91 | +3·4159 | +0·0106 | +0·0058 | 343 |
| 344 | Tauri ... ... ... ... | 6·3 | ... | 00·38 | 3 | 4 26 45·23 | +3·1843 | +0·0077 | +0·0050 | 344 |
| 345 | Tauri ... ... ... ... | 7·0† | ... | 98·34 | 4 | 4 27 45·36 | +3·4678 | +0·0111 | +0·0028 | 345 |
| 346 | Tauri ... ... ... ... | 7·0† | ... | 99·09 | 3 | 4 27 45·66 | +3·4678 | +0·0111 | +0·0028 | 346 |
| 347 | Tauri ... ... ... ... | 5·8 | ... | 98·41 | 3 | 4 28 22·42 | +3·7484 | +0·0155 | | 347 |
| 348 | Tauri ... ... ... ... | 8·0* | ... | 02·09 | 3 | 4 28 59·71 | +3·1490 | +0·0073 | | 348 |
| 349 | Eridani ... ... ... | 7·5 | ... | 99·15 | 3 | 4 29 18·83 | +3·0770 | +0·0066 | | 349 |
| 350 | Tauri ... ... ... ... | 6·4 | ... | 97·36 | 3 | 4 29 50·74 | +3·5142 | +0·0116 | −0·0020 | 350 |
| 351 | 87 Tauri ... ... ... $\alpha$ | 1·1 | ... | 98·77 | 11 | 4 30 10·85 | +3·4342 | +0·0105 | +0·0035 | 351 |
| 352 | Tauri ... ... ... ... | 6·0 | ... | 98·64 | 3 | 4 30 27·67 | +3·6009 | +0·0128 | +0·0132 | 352 |
| 353 | 49 Eridani ... ... ... | 5·3 | ... | 99·14 | 3 | 4 32 4·43 | +3·0899 | +0·0066 | −0·0020 | 353 |
| 354 | Tauri ... ... ... ... | 6·0 | 1 | 97·73 | 3 | 4 32 21·77 | +3·5360 | +0·0116 | | 354 |
| 355 | 89 Tauri ... ... ... ... | 5·8 | ... | 98·69 | 3 | 4 32 25·89 | +3·4245 | +0·0101 | +0·0054 | 355 |
| 356 | 91 Tauri ... ... ... $\sigma^1$ | 5·2 | ... | 98·73 | 3 | 4 33 26·47 | +3·4197 | +0·0100 | +0·0009 | 356 |
| 357 | 92 Tauri ... ... ... $\sigma^2$ | 5·0 | 1 | 98·33 | 3 | 4 33 33·19 | +3·4225 | +0·0100 | +0·0050 | 357 |
| 358 | Tauri ... ... ... ... | 6·7 | 1 | 96·08 | 3 | 4 35 4·04 | +3·7471 | +0·0144 | | 358 |
| 359 | Orionis ... ... ... | 8·0* | ... | 02·00 | 3 | 4 35 45·06 | +3·1231 | +0·0067 | | 359 |
| 360 | Tauri ... ... ... ... | 8·2 | 1 | 99·13 | 3 | 4 36 12·07 | +3·5962 | +0·0120 | | 360 |

317. A star of 8·5 magnitude (B.D. +23° 683) precedes $2^s$ and is north. 345. 1896 Feb. 3, Slightly brighter than second star, No. 346; 1899 Jan. 24, Bluish, slightly fainter than second star, No. 346; 1899 Feb. 3, Equal to No. 346 in magnitude. 346. Pale orange. 351. Orange-red. 358. Harvard magnitude, 5·7; B.D. 5·0.

| No. | Mean Year and Fraction of Year. | Number of Observations. | Mean N.P.D. | Precess. | Sec. Var. | Proper Motion. | Auwers' Bradley, 1755. | Lalande, 1800. | Weisse's Bessel (1), 1825. | Albany (A. G.), 1875. | Radcliffe, 1890. | Greenwich, 1890. | B.D. | No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ° ′ ″ | ″ | ″ | ″ | | | | | | | ° | |
| 316 | 99·04 | 3 | 73 27 21·4 | −8·658 | +0·455 | +0·032 | 596 | 8209 | | | | 1351 | +16 586 | 316 |
| 317 | 98·74 | 3 | 65 55 54·6 | −8·636 | +0·479 | +0·020 | 595 | 8206 | | | | 1354 | +23 684 | 317 |
| 318 | 98·09 | 3 | 72 47 15·2 | −8·607 | +0·458 | +0·020 | 597 | 8237 | | | | 1356 | +17 714 | 318 |
| 319 | 97·95 | 3 | 71 11 15·6 | −8·544 | +0·463 | 0·000 | 3231 | | | | | 1360 | +18 633 | 319 |
| 320 | 98·37 | 3 | 67 56 5·6 | −8·521 | +0·474 | +0·054 | 599 | 8278 | | | | | +21 642 | 320 |
| 321 | 98·74 | 3 | 68 1 43·0 | −8·517 | +0·474 | +0·051 | 600 | 8280 | | | | | +21 643 | 321 |
| 322 | 98·08 | 3 | 72 18 2·2 | −8·498 | +0·461 | +0·025 | 601 | 8297 | | | | 1363 | +17 719 | 322 |
| 323 | 99·11 | 3 | 67 24 47·0 | −8·449 | +0·477 | +0·034 | 604 | 8302 | | | 1052 | 1367 | +22 696 | 323 |
| 324 | 98·80 | 3 | 74 36 30·7 | −8·423 | +0·455 | +0·014 | 605 | 8317 | 366 | | | 1369 | +15 625 | 324 |
| 325 | 02·07 | 3 | 85 51 13·9 | −8·415 | +0·422 | | | 8340 | 377 | 1301 | | | + 4 691 | 325 |
| 326 | 02·97 | 3 | 89 11 45·2 | −8·412 | +0·413 | | | 8348 | 381 | | | | + 0 753 | 326 |
| 327 | 98·73 | 3 | 75 30 43·8 | −8·399 | +0·452 | +0·023 | 608 | 8330 | 375 | | | 1370 | +14 697 | 327 |
| 328 | 99·76 | 3 | 67 13 44·3 | −8·371 | +0·478 | +0·003 | 606 | 8331 | | | | | +22 699 | 328 |
| 329 | 02·12 | 3 | 88 8 41·0 | −8·331 | +0·416 | | | 8377 | 400 | 1308 | | | + 1 753 | 329 |
| 330 | 98·09 | 3 | 68 36 10·7 | −8·310 | +0·475 | +0·044 | | 8358 | | | | | +21 647 | 330 |
| 331 | 99·11 | 3 | 73 51 49·5 | −8·258 | +0·459 | −0·025 | 610 | 8397 | | | | 1374 | +16 605 | 331 |
| 332 | 98·07 | 3 | 71 2 29·0 | −8·254 | +0·468 | +0·028 | 609 | 8388 | | | 1061 | 1375 | +18 640 | 332 |
| 333 | 99·13 | 3 | 74 15 34·7 | −8·247 | +0·458 | +0·015 | 612 | 8402 | | | | 1376 | +15 631 | 333 |
| 334 | 01·06 | 3 | 88 21 52·2 | −8·246 | +0·417 | | | 8414 | | 1311 | | | + 1 755 | 334 |
| 335 | 99·12 | 3 | 74 21 3·0 | −8·240 | +0·458 | +0·003 | 613 | 8404 | | | | 1377 | +15 632 | 335 |
| 336 | 00·06 | 3 | 62 48 59·5 | −8·224 | +0·496 | | | 8396 | | | | 1378 | +27 661 | 336 |
| 337 | 00·14 | 3 | 74 3 42·9 | −8·214 | +0·459 | +0·024 | | 8411 | | | | 1379 | +15 633 | 337 |
| 338 | 02·12 | 3 | 88 50 26·2 | −8·207 | +0·416 | +0·031 | 615 | 8427 | 435 | 1314 | | | + 1 757 | 338 |
| 339 | 96·08 | 3 | 62 5 19·3 | −8·148 | +0·499 | | | 8418 | | | | 1381 | +27 662 | 339 |
| 340 | 98·63 | 3 | 74 34 49·1 | −8·121 | +0·458 | +0·004 | 617 | 8449 | 449 | | | | +15 636 | 340 |
| 341 | 98·73 | 3 | 74 1 24·0 | −8·089 | +0·460 | +0·020 | 619 | 8466 | | | | 1384 | +15 637 | 341 |
| 342 | 98·74 | 3 | 74 31 31·3 | −8·081 | +0·459 | +0·018 | 620 | 8470 | | | | | +15 639 | 342 |
| 343 | 98·37 | 3 | 74 21 45·8 | −7·984 | +0·460 | +0·026 | 623 | 8517 | | | | 1392 | +15 645 | 343 |
| 344 | 00·38 | 3 | 84 48 15·5 | −7·935 | +0·430 | −0·030 | | 8548 | 506 | 1328 | | | + 5 674 | 344 |
| 345 | 98·34 | 4 | 72 11 38·9 | −7·855 | +0·469 | +0·026 | | 8561 | | | | 1400 | +17 750 | 345 |
| 346 | 99·09 | 3 | 72 11 39·3 | −7·855 | +0·469 | +0·026 | | 8561 | | | | 1401 | +17 750 | 346 |
| 347 | 98·41 | 3 | 61 14 52·0 | −7·805 | +0·507 | | | 8568 | | | | 1404 | +28 666 | 347 |
| 348 | 02·09 | 3 | 86 27 33·5 | −7·755 | +0·427 | | | | 564 | 1335 | | | + 3 619 | 348 |
| 349 | 99·15 | 3 | 89 47 56·5 | −7·729 | +0·417 | | | 8633 | 572 | | | | + 0 789 | 349 |
| 350 | 97·36 | 3 | 70 19 28·3 | −7·686 | +0·477 | +0·011 | | 8627 | | | | 1413 | +19 742 | 350 |
| 351 | 98·14 | 3 | 73 41 29·7 | −7·659 | +0·466 | +0·184 | 630 | 8639 | | | 1092 | 1416 | +16 629 | 351 |
| 352 | 98·64 | 3 | 66 51 46·5 | −7·636 | +0·489 | −0·013 | | 8643 | | | | 1418 | +23 715 | 352 |
| 353 | 99·14 | 3 | 89 12 15·9 | −7·506 | +0·421 | +0·010 | 640 | 8715 | 639 | | | | + 0 798 | 353 |
| 354 | 97·73 | 3 | 69 30 57·3 | −7·482 | +0·482 | | | 8705 | | | | | +20 785 | 354 |
| 355 | 98·69 | 3 | 74 10 0·9 | −7·477 | +0·467 | +0·011 | 638 | 8710 | | | | | +15 661 | 355 |
| 356 | 98·73 | 3 | 74 23 49·1 | −7·395 | +0·467 | +0·066 | 641 | 8744 | | | | 1434 | +15 665 | 356 |
| 357 | 98·33 | 3 | 74 16 48·2 | −7·386 | +0·467 | +0·022 | 643 | 8748 | | | | 1435 | +15 666 | 357 |
| 358 | 96·08 | 3 | 61 34 43·0 | −7·262 | +0·513 | | | 8770 | | | | 1443 | +28 680 | 358 |
| 359 | 02·00 | 3 | 87 41 17·6 | −7·206 | +0·428 | | | | 727 | 1364 | | | + 2 747 | 359 |
| 360 | 99·13 | 3 | 67 14 58·0 | −7·170 | +0·493 | | | 8812 | | | | 1448 | +22 737 | 360 |

330. Authority for Proper Motions: Becker.
337, 345, 346. Authority for Proper Motions: Auwers (Berlin A).
344. Authority for Proper Motions: Boss.
350. Authority for Proper Motions: Auwers (Mayer's Sternverzeichnis).
352. Authority for Proper Motions: Bossert.

| No. | Constellation. | Magnitude. | Number of Estimations. | Mean Year and Fraction of Year. | Number of Observations. | Mean R.A. | Precess. | Sec. Var. | Proper Motion. | No. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | h. m. s. | s. | s. | s. | |
| 361 | 94 Tauri ... ... ... $\tau$ | 4·3 | ... | 98·84 | 19 | 4 36 14·46 | +3·5966 | +0·0120 | −0·0010 | 361 |
| 362 | Orionis ... ... ... | 7·2 | 1 | 99·13 | 3 | 4 39 34·05 | +3·0811 | +0·0062 | −0·0090 | 362 |
| 363 | Tauri ... ... ... ... | 6·1 | ... | 96·07 | 3 | 4 40 26·34 | +3·4946 | +0·0102 | +0·0048 | 363 |
| 364 | 57 Eridani ... ... $\mu$ | 4·2 | 2 | 99·07 | 25 | 4 40 30·07 | +2·9972 | +0·0055 | −0·0002 | 364 |
| 365 | Orionis ... ... ... | 8·2* | ... | 02·08 | 3 | 4 40 39·60 | +3·1646 | +0·0068 | | 365 |
| 366 | Orionis ... ... ... | 7·1 | 1 | 99·07 | 3 | 4 43 14·47 | +3·1286 | +0·0064 | −0·0020 | 366 |
| 367 | Orionis ... ... ... | 6·2 | ... | 98·98 | 3 | 4 43 29·54 | +3·1481 | +0·0065 | | 367 |
| 368 | 96 Tauri ... ... ... ... | 6·3 | ... | 96·07 | 3 | 4 44 0·78 | +3·4287 | +0·0091 | −0·0001 | 368 |
| 369 | 97 Tauri ... ... ... $i$ | 5·1 | ... | 96·09 | 3 | 4 45 31·37 | +3·5008 | +0·0098 | +0·0047 | 369 |
| 370 | Orionis ... ... ... | 6·7 | ... | 99·13 | 3 | 4 45 35·61 | +3·0943 | +0·0060 | | 370 |
| 371 | Orionis ... ... ... | 9·7 | 2 | 97·80 | 3 | 4 46 35·87 | +3·0652 | +0·0057 | | 371 |
| 372 | Tauri ... ... ... ... | 6·7 | 1 | 96·73 | 3 | 4 47 31·97 | +3·6160 | +0·0109 | | 372 |
| 373 | 5 Orionis ... ... ... | 5·5 | ... | 99·08 | 3 | 4 48 9·75 | +3·1247 | +0·0061 | 0·0000 | 373 |
| 374 | Orionis ... ... ... | 6·5 | ... | 99·15 | 3 | 4 48 45·10 | +3·1040 | +0·0059 | | 374 |
| 375 | 8 Orionis ... ... $\pi^5$ | 3·9 | ... | 00·11 | 3 | 4 49 2·48 | +3·1234 | +0·0060 | −0·0004 | 375 |
| 376 | Orionis ... ... ... | 5·9 | ... | 02·06 | 3 | 4 49 42·51 | +3·0795 | +0·0057 | | 376 |
| 377 | Tauri ... ... ... ... | 6·3 | ... | 96·08 | 3 | 4 50 9·97 | +3·6521 | +0·0110 | | 377 |
| 378 | 3 Aurigae ... ... $\iota$ | 3·0 | ... | 01·08 | 3 | 4 50 28·72 | +3·9015 | +0·0142 | +0·0006 | 378 |
| 379 | Orionis ... ... ... | 6·8 | 1 | 99·15 | 3 | 4 50 37·39 | +3·1735 | +0·0063 | +0·0120 | 379 |
| 380 | Orionis ... ... ... | 7·4 | 1 | 00·02 | 3 | 4 50 39·21 | +3·1897 | +0·0064 | | 380 |
| 381 | Orionis ... ... ... | 6·9 | ... | 99·15 | 3 | 4 50 50·19 | +3·1053 | +0·0058 | | 381 |
| 382 | Tauri ... ... ... ... | 6·0 | 1 | 97·38 | 3 | 4 51 35·71 | +3·4633 | +0·0088 | −0·0006 | 382 |
| 383 | 99 Tauri ... ... ... ... | 6·0 | 1 | 98·02 | 3 | 4 51 44·51 | +3·6361 | +0·0106 | −0·0013 | 383 |
| 384 | 98 Tauri ... ... ... $k$ | 5·7 | 1 | 97·44 | 3 | 4 52 2·04 | +3·6661 | +0·0109 | +0·0011 | 384 |
| 385 | 10 Orionis .. ... $\pi^6$ | 4·7 | ... | 99·05 | 3 | 4 53 21·86 | +3·1076 | +0·0057 | −0·0014 | 385 |
| 386 | Orionis ... ... ... | 9·6 | 1 | 97·80 | 3 | 4 53 29·80 | +3·0701 | +0·0054 | | 386 |
| 387 | Orionis ... ... ... | 7·0† | ... | 99·10 | 3 | 4 55 17·14 | +3·1505 | +0·0059 | | 387 |
| 388 | Orionis ... ... ... | 6·3† | ... | 99·10 | 3 | 4 55 18·60 | +3·1505 | +0·0059 | | 388 |
| 389 | Orionis ... ... ... | 7·1 | ... | 99·14 | 3 | 4 55 29·21 | +3·1720 | +0·0060 | | 389 |
| 390 | Orionis ... ... ... | 6·2 | ... | 99·09 | 3 | 4 56 41·47 | +3·0857 | +0·0054 | | 390 |
| 391 | Orionis ... ... ... | 7·0 | 1 | 99·11 | 3 | 4 56 49·23 | +3·1056 | +0·0055 | | 391 |
| 392 | 102 Tauri ... ... ... $\iota$ | 4·7 | ... | 96·08 | 3 | 4 57 7·01 | +3·5782 | +0·0093 | +0·0040 | 392 |
| 393 | Tauri ... ... ... ... | 6·3 | ... | 96·08 | 3 | 4 59 38·37 | +3·5341 | +0·0086 | −0·0007 | 393 |
| 394 | Tauri ... ... ... ... | 6·3 | 1 | 98·03 | 3 | 4 59 41·86 | +3·7104 | +0·0103 | | 394 |
| 395 | Orionis ... ... W | Var. | ... | 99·09 | 3 | 5 0 13·76 | +3·0961 | +0·0053 | | 395 |
| 396 | 2 Leporis ... ... $\epsilon$ | 3·4 | ... | 00·69 | 13 | 5 1 13·64 | +2·5370 | +0·0033 | +0·0004 | 396 |
| 397 | 104 Tauri ... ... ... $m$ | 5·3 | 1 | 97·48 | 3 | 5 1 32·25 | +3·5058 | +0·0081 | +0·0375 | 397 |
| 398 | 106 Tauri ... ... ... $l$ | 5·2 | ... | 98·71 | 3 | 5 1 53·22 | +3·5510 | +0·0085 | −0·0034 | 398 |
| 399 | 105 Tauri ... ... ... ... | 6·0 | ... | 97·77 | 3 | 5 1 56·60 | +3·5844 | +0·0088 | −0·0018 | 399 |
| 400 | 103 Tauri ... ... ... ... | 5·7 | 1 | 98·77 | 3 | 5 2 0·96 | +3·6526 | +0·0094 | −0·0009 | 400 |
| 401 | 107 Tauri ... ... ... ... | 6·5 | ... | 97·76 | 3 | 5 2 56·24 | +3·5374 | +0·0083 | −0·0010 | 401 |
| 402 | Tauri ... ... ... ... | 6·0 | ... | 98·43 | 3 | 5 3 28·23 | +3·7592 | +0·0103 | | 402 |
| 403 | Orionis ... ... ... | 7·1 | 3 | 99·12 | 3 | 5 3 41·74 | +3·1427 | +0·0053 | | 403 |
| 404 | Orionis ... ... ... | 7·5 | 3 | 99·14 | 3 | 5 5 13·67 | +3·1907 | +0·0055 | | 404 |
| 405 | Orionis ... ... ... | 5·4 | ... | 96·11 | 3 | 5 5 56·86 | +3·4435 | +0·0072 | −0·0021 | 405 |

373. Orange. 378. Orange-red. 379. B.D. magnitude, 8·0; Albany, 7·1. The N.P.D. given in the Lalande Catalogue is 1′ too great. 380. Harvard magnitude, 6·4; B.D., 7·3. 388. About 0·3 magnitude brighter than No. 387. 391. Wide double (Σ 630); brighter observed. Companion follows, north, magnitude 8·1. 395. 1899 Jan. 14, Red. 1899 Feb. 14, Reddish. The limits of magnitude are 6 and 7; the period is 32 days. 396. Red.

| No. | Mean Year and Fraction of Year. | Number of Observations. | Mean N.P.D. | Precess. | Sec. Var. | Proper Motion. | Auwers' Bradley, 1755. | Lalande, 1800. | Weisse's Bessel (1), 1825. | Albany (A. G.), 1875. | Radcliffe, 1890. | Greenwich, 1890. | B.D. | No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ° ′ ″ | ″ | ″ | ″ | | | | | | | ° | |
| 361 | 97·73 | 3 | 67 14 4·7 | −7·166 | +0·493 | +0·009 | 648 | 8815 | | | 1113 | 1451 | +22 739 | 361 |
| 362 | 99·13 | 3 | 89 37 0·1 | −6·894 | +0·425 | 0·000 | | 8934 | 808 | | | | + 0 834 | 362 |
| 363 | 96·07 | 3 | 71 26 46·0 | −6·822 | +0·482 | +0·064 | | 8937 | | | | 1468 | +18 719 | 363 |
| 364 | 00·84 | 5 | 93 26 16·1 | −6·817 | +0·414 | +0·002 | 657 | 8958 | 827 | | 1129 | 1470 | − 3 876 | 364 |
| 365 | 02·08 | 3 | 85 49 21·8 | −6·804 | +0·437 | | | 8952 | 825 | 1398 | | | + 4 749 | 365 |
| 366 | 99·07 | 3 | 87 27 49·9 | −6·591 | +0·434 | −0·110 | | 9031 | 875 | 1420 | | | + 2 773 | 366 |
| 367 | 98·98 | 3 | 86 35 14·7 | −6·570 | +0·437 | | | 9037 | 881 | 1424 | | | + 3 681 | 367 |
| 368 | 96·07 | 3 | 74 16 12·1 | −6·527 | +0·476 | −0·010 | 660 | 9038 | | | | 1481 | +15 687 | 368 |
| 369 | 97·81 | 4 | 71 19 48·5 | −6·402 | +0·487 | +0·034 | 666 | 9081 | | | | 1490 | +18 743 | 369 |
| 370 | 99·13 | 3 | 89 1 24·3 | −6·396 | +0·431 | | | 9101 | 936 | 1439 | | | + 0 871 | 370 |
| 371 | 98·13 | 4 | 90 20 19·0 | −6·313 | +0·427 | | | | | | | | | 371 |
| 372 | 96·73 | 3 | 66 51 1·6 | −6·235 | +0·504 | | | 9136 | | | | 1497 | +23 757 | 372 |
| 373 | 99·08 | 3 | 87 39 25·1 | −6·183 | +0·436 | +0·014 | 675 | 9183 | 990 | 1459 | | 1500 | + 2 800 | 373 |
| 374 | 99·15 | 3 | 88 35 40·8 | −6·134 | +0·434 | | | 9207 | | 1467 | | | + 1 847 | 374 |
| 375 | 00·11 | 3 | 87 43 23·4 | −6·110 | +0·436 | +0·007 | 680 | 9213 | 1023 | 1471 | 1156 | 1504 | + 2 810 | 375 |
| 376 | 02·06 | 3 | 89 41 40·6 | −6·054 | +0·431 | | | 9235 | 1041 | | | | + 0 893 | 376 |
| 377 | 96·08 | 3 | 65 34 2·3 | −6·016 | +0·511 | | | 9223 | | | | 1508 | +24 709 | 377 |
| 378 | 02·09 | 4 | 56 59 31·3 | −5·990 | +0·546 | +0·003 | 677 | 9221 | | | 1160 | 1509 | +32 855 | 378 |
| 379 | 99·15 | 3 | 85 29 3·1 | −5·978 | +0·444 | +0·290 | | 9253 | 1055 | 1480 | | | + 4 782 | 379 |
| 380 | 00·02 | 3 | 84 45 36·3 | −5·975 | +0·447 | | | 9255 | 1057 | 1481 | | | + 5 769 | 380 |
| 381 | 99·15 | 3 | 88 32 6·8 | −5·960 | +0·435 | | | 9261 | | 1483 | | | + 1 857 | 381 |
| 382 | 97·38 | 3 | 73 0 10·6 | −5·897 | +0·485 | −0·010 | 686 | 9271 | | | | 1517 | +16 672 | 382 |
| 383 | 98·02 | 3 | 66 12 25·9 | −5·884 | +0·510 | +0·010 | 684 | 9262 | | | | 1518 | +23 777 | 383 |
| 384 | 97·44 | 3 | 65 6 13·3 | −5·860 | +0·514 | +0·049 | 685 | 9274 | | | | 1519 | +24 717 | 384 |
| 385 | 99·05 | 3 | 88 26 21·9 | −5·748 | +0·437 | −0·001 | 695 | 9358 | 1119 | 1513 | | 1523 | + 1 872 | 385 |
| 386 | 97·80 | 3 | 90 7 3·4 | −5·737 | +0·431 | | | | | | | | | 386 |
| 387 | 99·10 | 3 | 86 32 1·8 | −5·587 | +0·444 | | | 9418 | | 1525 | | | + 3 736 | 387 |
| 388 | 99·10 | 3 | 86 31 58·3 | −5·585 | +0·444 | | | 9419 | 1162 | 1526 | | | + 3 737 | 388 |
| 389 | 99·14 | 3 | 85 34 47·5 | −5·570 | +0·447 | | | 9426 | 1171 | 1528 | | | + 4 811 | 389 |
| 390 | 99·09 | 3 | 89 25 23·2 | −5·469 | +0·435 | | | 9462 | 1207 | | | 1540 | + 0 923 | 390 |
| 391 | 99·11 | 3 | 88 32 12·8 | −5·458 | +0·438 | | | 9465 | | 1537 | | | + 1 886 | 391 |
| 392 | 96·08 | 3 | 68 33 9·7 | −5·433 | +0·505 | +0·040 | 698 | 9450 | | | | 1542 | +21 751 | 392 |
| 393 | 96·08 | 3 | 70 19 51·2 | −5·220 | +0·500 | +0·009 | | 9536 | | | | 1556 | +19 847 | 393 |
| 394 | 98·03 | 3 | 63 42 25·8 | −5·215 | +0·525 | | | 9531 | | | | 1557 | +26 783 | 394 |
| 395 | 99·09 | 3 | 88 57 36·0 | −5·170 | +0·438 | | | 9581 | 1296 | 1565 | | 1559 | + 0 939 | 395 |
| 396 | 02·04 | 3 | 112 30 18·9 | −5·086 | +0·360 | +0·068 | 713 | 9647 | | | 1208 | 1561 | −22 1000 | 396 |
| 397 | 97·48 | 3 | 71 29 20·5 | −5·060 | +0·497 | −0·022 | 705 | 9599 | | | 1209 | 1562 | +18 779 | 397 |
| 398 | 98·71 | 3 | 69 42 48·4 | −5·030 | +0·503 | +0·029 | 708 | 9615 | | | | 1565 | +20 885 | 398 |
| 399 | 97·77 | 3 | 68 25 38·4 | −5·026 | +0·508 | −0·003 | 707 | 9613 | | | | 1566 | +21 766 | 399 |
| 400 | 98·77 | 3 | 65 52 0·4 | −5·019 | +0·518 | 0·000 | 706 | 9612 | | | | 1567 | +24 755 | 400 |
| 401 | 97·76 | 3 | 70 16 11·2 | −4·941 | +0·502 | −0·003 | 710 | 9648 | | | | 1570 | +19 853 | 401 |
| 402 | 98·43 | 3 | 62 5 47·0 | −4·896 | +0·534 | | | 9653 | | | | | +27 732 | 402 |
| 403 | 99·12 | 3 | 86 54 35·5 | −4·877 | +0·447 | | | 9699 | | 1588 | | | + 3 785 | 403 |
| 404 | 99·14 | 3 | 84 48 37·8 | −4·747 | +0·454 | | | 9745 | 30 | 1596 | | | + 5 827 | 404 |
| 405 | 96·11 | 3 | 74 4 40·0 | −4·685 | +0·490 | −0·008 | | | | | | | +15 759 | 405 |

362. Authority for Proper Motions: Bossert. 363, 393. Authority for Proper Motions: Auwers (Mayer's Sternverzeichnis). 366. Authority for Proper Motions: Boss. 379. The Proper Motions have been specially computed for the present catalogue. 405. Authority for Proper Motions: Auwers (Berlin A).

| No. | Constellation. | Magnitude. | Number of Estimations. | Mean Year and Fraction of Year. | Number of Observations. | Mean R.A. | Precess. | Sec. Var. | Proper Motion. | No. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | h. m. s. | s. | s. | s. | |
| 406 | Orionis ... ... ... | 7·4 | 2 | 99·12 | 3 | 5 6 27·92 | +3·1702 | +0·0053 | +0·0130 | 406 |
| 407 | Orionis ... ... ... | 7·1 | 4 | 02·10 | 3 | 5 6 32·92 | +3·0816 | +0·0049 | | 407 |
| 408 | Orionis ... ... ... | 6·9 | 1 | 99·15 | 3 | 5 6 35·74 | +3·0935 | +0·0049 | | 408 |
| 409 | 17 Orionis ... ... $\rho$ | 4·7 | ... | 99·14 | 3 | 5 8 3·69 | +3·1351 | +0·0051 | −0·0013 | 409 |
| 410 | Orionis ... ... ... | 6·8 | 1 | 99·11 | 3 | 5 8 19·78 | +3·1148 | +0·0050 | | 410 |
| 411 | Orionis ... ... ... | 6·6 | 4 | 99·15 | 3 | 5 8 38·72 | +3·0828 | +0·0048 | | 411 |
| 412 | Orionis ... ... ... | 5·8 | ... | 00·11 | 3 | 5 9 25·06 | +3·1878 | +0·0053 | | 412 |
| 413 | 19 Orionis ... ... $\beta$ | 0·4 | ... | 99·35 | 13 | 5 9 43·85 | +2·8820 | +0·0039 | −0·0012 | 413 |
| 414 | Aurigae ... ... ... | 6·9 | ... | 97·44 | 3 | 5 10 55·99 | +3·7907 | +0·0094 | | 414 |
| 415 | Orionis ... ... ... | 6·9 | 1 | 99·04 | 3 | 5 11 29·43 | +3·1146 | +0·0048 | | 415 |
| 416 | 109 Tauri ... ... ... $n$ | 5·1 | ... | 96·79 | 3 | 5 13 16·02 | +3·6015 | +0·0075 | +0·0011 | 416 |
| 417 | Tauri ... ... ... ... | 6·3 | ... | 98·41 | 3 | 5 13 19·65 | +3·5500 | +0·0072 | −0·0022 | 417 |
| 418 | 21 Orionis ... ... ... | 5·9 | 3 | 99·14 | 3 | 5 13 58·16 | +3·1297 | +0·0047 | −0·0022 | 418 |
| 419 | Tauri ... ... ... ... | 6·6 | ... | 97·79 | 3 | 5 14 24·36 | +3·5361 | +0·0069 | −0·0027 | 419 |
| 420 | Tauri ... ... ... ... | 6·4 | ... | 98·75 | 3 | 5 14 42·55 | +3·7654 | +0·0086 | −0·0031 | 420 |
| 421 | Aurigae ... ... ... | 6·0 | 1 | 98·10 | 3 | 5 14 50·88 | +3·8135 | +0·0090 | | 421 |
| 422 | Tauri ... ... ... ... | 6·5 | ... | 98·77 | 3 | 5 15 2·06 | +3·5425 | +0·0069 | −0·0004 | 422 |
| 423 | Orionis ... ... ... | 6·7 | 2 | 99·16 | 3 | 5 15 30·48 | +3·1287 | +0·0046 | | 423 |
| 424 | Orionis ... ... ... | 6·7 | ... | 02·05 | 3 | 5 15 38·30 | +3·1375 | +0·0046 | | 424 |
| 425 | Orionis ... ... ... | 6·4 | ... | 99·16 | 3 | 5 16 2·86 | +3·1624 | +0·0047 | | 425 |
| 426 | Orionis ... ... ... | 7·2 | 2 | 01·08 | 3 | 5 17 32·01 | +3·1348 | +0·0045 | | 426 |
| 427 | 23 Orionis ... ... $m$ | 5·6 | 2 | 99·15 | 3 | 5 17 34·61 | +3·1519 | +0·0046 | −0·0014 | 427 |
| 428 | Orionis ... ... ... | 8·0 | 2 | 99·15 | 3 | 5 17 35·66 | +3·1521 | +0·0046 | | 428 |
| 429 | 111 Tauri ... ... ... ... | 5·1 | ... | 98·45 | 3 | 5 18 35·26 | +3·4821 | +0·0061 | +0·0157 | 429 |
| 430 | Orionis ... ... ... | 7·1 | 2 | 99·10 | 3 | 5 19 23·46 | +3·1247 | +0·0044 | | 430 |
| 431 | 25 Orionis ... ... $\psi^1$ | 4·8 | ... | 00·10 | 3 | 5 19 33·32 | +3·1131 | +0·0043 | −0·0026 | 431 |
| 432 | 112 Tauri ... ... ... $\beta$ | 1·7 | ... | 99·24 | 8 | 5 19 58·14 | +3·7882 | +0·0079 | +0·0013 | 432 |
| 433 | Orionis ... ... ... | 6·7 | 1 | 01·09 | 3 | 5 20 38·56 | +3·0826 | +0·0041 | | 433 |
| 434 | Orionis ... ... ... | 8·0* | ... | 02·12 | 3 | 5 21 6·58 | +3·1595 | +0·0044 | | 434 |
| 435 | 115 Tauri ... ... ... ... | 5·3 | ... | 96·08 | 3 | 5 21 20·03 | +3·4978 | +0·0059 | −0·0011 | 435 |
| 436 | Orionis ... ... ... | 7·5 | 1 | 02·17 | 3 | 5 21 28·22 | +3·1648 | +0·0044 | | 436 |
| 437 | 30 Orionis ... ... $\psi^2$ | 5·1 | 2 | 99·16 | 3 | 5 21 35·83 | +3·1420 | +0·0043 | −0·0010 | 437 |
| 438 | 114 Tauri ... ... ... $o$ | 4·8 | ... | 98·76 | 3 | 5 21 37·64 | +3·6013 | +0·0065 | −0·0011 | 438 |
| 439 | Orionis ... ... ... | 7·1 | 1 | 01·12 | 3 | 5 21 52·15 | +3·1596 | +0·0043 | | 439 |
| 440 | Orionis ... ... ... | 6·8 | 1 | 99·10 | 3 | 5 22 2·72 | +3·1247 | +0·0042 | | 440 |
| 441 | 117 Tauri ... ... ... ... | 6·0 | ... | 98·41 | 3 | 5 22 13·29 | +3·4798 | +0·0057 | −0·0004 | 441 |
| 442 | Orionis ... ... ... | 7·0 | 1 | 01·13 | 3 | 5 22 51·22 | +3·1007 | +0·0041 | | 442 |
| 443 | 118 Tauri ... ... ... ... | 5·4 | ... | 98·72 | 3 | 5 23 7·15 | +3·6900 | +0·0068 | +0·0004 | 443 |
| 444 | Orionis ... ... ... | 7·3 | 1 | 01·55 | 5 | 5 23 34·25 | +3·1087 | +0·0040 | | 444 |
| 445 | Orionis ... ... ... | 6·8 | 2 | 01·39 | 4 | 5 24 43·36 | +3·1122 | +0·0040 | | 445 |
| 446 | Orionis ... ... ... | 6·4 | ... | 00·15 | 3 | 5 25 2·79 | +3·1681 | +0·0042 | | 446 |
| 447 | 33 Orionis ... ... $n^1$ | 7·4 | 3 | 99·15 | 3 | 5 25 59·62 | +3·1470 | +0·0040 | −0·0016 | 447 |
| 448 | 119 Tauri ... ... ... ... | 4·9 | ... | 98·78 | 3 | 5 26 20·91 | +3·5157 | +0·0055 | −0·0003 | 448 |
| 449 | Tauri ... ... ... ... | 5·5 | ... | 98·44 | 3 | 5 26 26·29 | +3·4766 | +0·0053 | −0·0008 | 449 |
| 450 | 34 Orionis ... ... $\delta$ | 3·0 | 1 | 98·13 | 6 | 5 26 53·79 | +3·0641 | +0·0037 | −0·0014 | 450 |

408. Companion, magnitude 9, just precedes and is south. 409. Orange. Companion, magnitude 9, blue, follows north. 411. Reddish. 412. Light orange. 437. Double. Companion, magnitude 9·3, precedes north. 438. Blue. 439. Followed $9^s$, about 2′ south, by a star (B.D. +3° 905), magnitude 8·5. 443. North, following and brighter of two stars observed. 447. Close double; brighter observed. Companion, magnitude 8·4, follows north. 448. Reddish. 449. Double. Brighter observed. The companion, following south, is only slightly fainter.

| No. | Mean Year and Fraction of Year. | Number of Observations. | Mean N.P.D. | Precess. | Sec. Var. | Proper Motion. | Auwers' Bradley, 1755. | Lalande, 1800. | Weisse's Bessel (I), 1825. | Albany (A. G.), 1875. | Radcliffe, 1890. | Greenwich, 1890. | B.D. | No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ° ′ ″ | ″ | ″ | ″ | | | | | | | ° | |
| 406 | 99·12 | 3 | 85 42 54·7 | −4·641 | +0·452 | +0·100 | | | 55 | 1600 | | | +4 858 | 406 |
| 407 | 02·10 | 3 | 89 36 28·3 | −4·634 | +0·439 | | | 9767 | 61 | | | | +0 974 | 407 |
| 408 | 99·15 | 3 | 89 5 7·0 | −4·630 | +0·441 | | | | 64 | 1602 | | | +0 975 | 408 |
| 409 | 99·14 | 3 | 87 15 27·1 | −4·505 | +0·447 | +0·001 | 725 | | 103 | 1608 | | 1594 | +2 888 | 409 |
| 410 | 99·11 | 3 | 88 9 2·6 | −4·482 | +0·445 | | | 9802 | | 1614 | | | +1 938 | 410 |
| 411 | 99·15 | 3 | 89 33 24·3 | −4·456 | +0·440 | | | 9806 | 126 | | | | +0 988 | 411 |
| 412 | 00·11 | 3 | 84 57 34·9 | −4·390 | +0·456 | | | 9820 | | 1623 | | 1606 | +4 877 | 412 |
| 413 | 02·06 | 3 | 98 19 0·7 | −4·363 | +0·412 | −0·005 | 736 | 9834 | 163 | | 1248 | 1609 | −8 1063 | 413 |
| 414 | 97·44 | 3 | 61 12 20·3 | −4·260 | +0·542 | | | 9827 | | | | 1613 | +28 772 | 414 |
| 415 | 99·04 | 3 | 88 9 48·0 | −4·212 | +0·446 | | | 9878 | | 1639 | | | +1 957 | 415 |
| 416 | 96·79 | 3 | 68 0 24·4 | −4·061 | +0·516 | +0·082 | 741 | 9909 | | | | 1622 | +21 816 | 416 |
| 417 | 98·41 | 3 | 69 58 12·9 | −4·055 | +0·509 | +0·021 | | 9913 | | | | 1623 | +19 893 | 417 |
| 418 | 99·14 | 3 | 87 30 27·7 | −4·000 | +0·449 | +0·048 | 744 | 9953 | 248 | 1653 | | | +2 916 | 418 |
| 419 | 97·79 | 3 | 70 31 27·4 | −3·963 | +0·507 | +0·020 | | 9948 | | | | 1625 | +19 898 | 419 |
| 420 | 98·75 | 3 | 62 8 38·1 | −3·937 | +0·540 | +0·015 | | 9944 | | | | 1627 | +27 758 | 420 |
| 421 | 98·10 | 3 | 60 31 53·7 | −3·925 | +0·547 | | | 9947 | | | | 1628 | +29 869 | 421 |
| 422 | 98·77 | 3 | 70 17 12·8 | −3·909 | +0·508 | +0·012 | | 9963 | | | | 1630 | +19 902 | 422 |
| 423 | 99·16 | 3 | 87 33 25·8 | −3·868 | +0·449 | | | 10002 | 287 | 1663 | | | +2 924 | 423 |
| 424 | 02·05 | 3 | 87 10 21·3 | −3·857 | +0·451 | | | 10012 | 291 | 1664 | | | +2 926 | 424 |
| 425 | 99·16 | 3 | 86 5 15·8 | −3·822 | +0·454 | | | 10028 | 303 | 1667 | | | +3 857 | 425 |
| 426 | 01·08 | 3 | 87 17 55·9 | −3·694 | +0·451 | | | 10086 | | 1683 | | | +2 936 | 426 |
| 427 | 99·15 | 3 | 86 33 6·9 | −3·690 | +0·453 | +0·002 | 753 | 10088 | 342 | 1684 | | | +3 871 | 427 |
| 428 | 99·15 | 3 | 86 32 38·7 | −3·689 | +0·453 | | | 10089 | 343 | 1685 | | | +3 872 | 428 |
| 429 | 98·45 | 3 | 72 42 33·4 | −3·604 | +0·501 | −0·006 | 754 | 10097 | | | 1284 | 1641 | +17 920 | 429 |
| 430 | 99·10 | 3 | 87 44 19·9 | −3·534 | +0·450 | | | 10133 | | 1703 | | | +2 947 | 430 |
| 431 | 00·10 | 3 | 88 14 42·1 | −3·520 | +0·448 | +0·009 | 763 | 10145 | 391 | 1708 | | | +1 1005 | 431 |
| 432 | 00·09 | 3 | 61 28 36·6 | −3·485 | +0·546 | +0·180 | 756 | 10114 | | | 1295 | 1647 | +28 795 | 432 |
| 433 | 01·09 | 3 | 89 34 7·1 | −3·427 | +0·444 | | | 10181 | 414 | | | | +0 1056 | 433 |
| 434 | 02·12 | 3 | 86 13 54·8 | −3·386 | +0·456 | | | | 430 | 1718 | | | +3 898 | 434 |
| 435 | 96·08 | 3 | 72 7 24·6 | −3·367 | +0·504 | +0·003 | 767 | 10179 | | | | 1655 | +17 928 | 435 |
| 436 | 02·17 | 3 | 86 0 14·6 | −3·355 | +0·456 | | | | 444 | 1721 | | | +3 899 | 436 |
| 437 | 99·16 | 3 | 86 59 28·0 | −3·344 | +0·453 | +0·006 | 773 | 10212 | | 1723 | 1303 | 1658 | +2 962 | 437 |
| 438 | 98·76 | 3 | 68 8 53·8 | −3·342 | +0·519 | −0·006 | 768 | 10185 | | | 1302 | 1657 | +21 847 | 438 |
| 439 | 01·12 | 3 | 86 13 48·8 | −3·321 | +0·456 | | | 10221 | 458 | 1726 | | | +3 903 | 439 |
| 440 | 99·10 | 3 | 87 44 39·9 | −3·306 | +0·451 | | | | 466 | 1729 | | | +2 965 | 440 |
| 441 | 98·41 | 3 | 72 50 37·8 | −3·290 | +0·502 | +0·045 | | 10217 | | | | 1660 | +17 931 | 441 |
| 442 | 01·13 | 3 | 88 47 7·8 | −3·236 | +0·448 | | | 10264 | | 1736 | | 1663 | +1 1021 | 442 |
| 443 | 98·72 | 3 | 64 55 49·2 | −3·213 | +0·533 | +0·018 | 775 | 10231 | | | | 1666 | +25 839 | 443 |
| 444 | 01·15 | 3 | 88 26 16·7 | −3·174 | +0·449 | | | 10292 | 509 | 1751 | | | +1 1026 | 444 |
| 445 | 01·13 | 3 | 88 17 23·8 | −3·074 | +0·450 | | | 10328 | | 1764 | | | +1 1032 | 445 |
| 446 | 00·15 | 3 | 85 52 22·0 | −3·046 | +0·458 | | | 10339 | 543 | 1768 | | | +4 949 | 446 |
| 447 | 99·15 | 3 | 86 47 2·2 | −2·964 | +0·455 | +0·005 | 784 | 10375 | 568 | 1779 | | | +3 948 | 447 |
| 448 | 98·78 | 3 | 71 28 48·2 | −2·934 | +0·508 | +0·002 | 783 | 10367 | | | 1327 | 1683 | +18 875 | 448 |
| 449 | 98·44 | 3 | 73 0 56·3 | −2·926 | +0·503 | −0·005 | | | | | | 1685 | +16 794 | 449 |
| 450 | 98·12 | 3 | 90 22 22·4 | −2·886 | +0·444 | +0·005 | 787 | 10404 | 604 | | 1331 | 1688 | −0 983 | 450 |

406. Authority for Proper Motions: Boss. Sternverzeichnis).

417, 419, 420, 422. Authority for Proper Motions: Auwers (Mayer's

441, 449. Authority for Proper Motions: Auwers (Berlin A).

| No. | Constellation. | Magnitude. | Number of Estimations. | Mean Year and Fraction of Year. | Number of Observations. | Mean R.A. | Precess. | Sec. Var. | Proper Motion. | No. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | h. m. s. | s. | s. | s. | |
| 451 | 120 Tauri ... ... ... ... | 5·6 | ... | 96·06 | 3 | 5 27 39·90 | +3·5148 | +0·0053 | +0·0001 | 451 |
| 452 | Tauri ... ... ... ... | 6·1 | ... | 98·46 | 3 | 5 27 42·10 | +3·5650 | +0·0056 | −0·0017 | 452 |
| 453 | 11 Leporis ... ... *a* | 2·6 | ... | 00·84 | 4 | 5 28 19·10 | +2·6452 | +0·0029 | −0·0011 | 453 |
| 454 | Orionis ... ... ... | 6·4 | ... | 01·12 | 3 | 5 28 47·09 | +3·1037 | +0·0037 | | 454 |
| 455 | 38 Orionis ... ... $n^2$ | 5·8 | 2 | 99·15 | 3 | 5 29 0·95 | +3·1584 | +0·0039 | −0·0025 | 455 |
| 456 | 121 Tauri ... ... ... ... | 5·1 | ... | 98·06 | 3 | 5 29 20·56 | +3·6618 | +0·0058 | −0·0003 | 456 |
| 457 | 46 Orionis ... ... $\epsilon$ | 1·6 | ... | 99·77 | 6 | 5 31 8·26 | +3·0434 | +0·0034 | −0·0018 | 457 |
| 458 | 122 Tauri ... ... ... ... | 5·5 | ... | 98·76 | 3 | 5 31 15·48 | +3·4777 | +0·0048 | +0·0024 | 458 |
| 459 | 123 Tauri ... ... ... $\zeta$ | 3·0 | ... | 98·80 | 3 | 5 31 40·03 | +3·5841 | +0·0052 | −0·0007 | 459 |
| 460 | Orionis ... ... ... | 7·5 | ... | 02·15 | 3 | 5 31 55·02 | +3·1819 | +0·0037 | | 460 |
| 461 | Aurigae ... ... ... | 6·0 | ... | 98·77 | 3 | 5 32 56·75 | +3·8134 | +0·0060 | | 461 |
| 462 | 125 Tauri ... ... ... ... | 5·1 | ... | 97·76 | 3 | 5 33 32·31 | +3·7158 | +0·0055 | 0·0000 | 462 |
| 463 | 47 Orionis ... ... $\omega$ | 5·2 | 3 | 99·14 | 3 | 5 33 54·26 | +3·1671 | +0·0036 | −0·0003 | 463 |
| 464 | Orionis ... ... ... | 7·3 | 1 | 99·16 | 3 | 5 34 38·24 | +3·1060 | +0·0034 | | 464 |
| 465 | Orionis ... ... ... | 7·2 | 2 | 01·11 | 3 | 5 35 26·09 | +3·1896 | +0·0035 | | 465 |
| 466 | 126 Tauri ... ... ... ... | 4·8 | ... | 96·11 | 3 | 5 35 30·90 | +3·4659 | +0·0043 | +0·0001 | 466 |
| 467 | Orionis ... ... ... | 6·7 | 1 | 02·13 | 4 | 5 35 57·45 | +3·0794 | +0·0033 | | 467 |
| 468 | Columbae ... ... *a* | 2·7 | ... | 01·43 | 3 | 5 36 1·55 | +2·1716 | +0·0028 | +0·0050 | 468 |
| 469 | Orionis ... ... ... | 7·2 | 1 | 00·11 | 3 | 5 36 10·45 | +3·1594 | +0·0034 | | 469 |
| 470 | Orionis ... ... ... | 7·2 | 1 | 00·12 | 3 | 5 37 4·81 | +3·1265 | +0·0033 | | 470 |
| 471 | Tauri ... ... ... ... | 6·3 | 1 | 96·10 | 3 | 5 37 15·06 | +3·6416 | +0·0047 | | 471 |
| 472 | 51 Orionis ... ... *b* | 6·0 | 1 | 01·11 | 3 | 5 37 18·30 | +3·1058 | +0·0032 | −0·0050 | 472 |
| 473 | Orionis ... ... ... | 7·1 | 2 | 99·09 | 3 | 5 39 45·27 | +3·1651 | +0·0032 | | 473 |
| 474 | Orionis ... ... ... | 6·2 | 1 | 99·12 | 3 | 5 41 25·39 | +3·0991 | +0·0030 | −0·0049 | 474 |
| 475 | 130 Tauri ... ... ... ... | 5·7 | 1 | 98·08 | 3 | 5 41 36·26 | +3·4978 | +0·0037 | −0·0013 | 475 |
| 476 | 132 Tauri ... ... ... ... | 5·0 | ... | 98·17 | 3 | 5 42 52·66 | +3·6812 | +0·0040 | −0·0009 | 476 |
| 477 | 53 Orionis ... ... $\kappa$ | 2·3 | 1 | 98·00 | 18 | 5 43 0·75 | +2·8447 | +0·0026 | −0·0017 | 477 |
| 478 | Orionis ... ... ... | 8·3* | ... | 00·05 | 3 | 5 43 3·52 | +3·1094 | +0·0029 | | 478 |
| 479 | Orionis ... ... ... | 7·4 | 1 | 00·13 | 3 | 5 43 37·00 | +3·0888 | +0·0028 | | 479 |
| 480 | Tauri ... ... ... ... | 5·7 | ... | 96·76 | 3 | 5 44 39·93 | +3·7801 | +0·0040 | | 480 |
| 481 | Orionis ... ... ... | 6·1 | 1 | 99·12 | 3 | 5 44 55·39 | +3·1752 | +0·0029 | | 481 |
| 482 | Orionis ... ... ... | 7·0 | 1 | 02·37 | 4 | 5 45 17·97 | +3·1192 | +0·0028 | | 482 |
| 483 | Tauri ... ... ... ... | 6·3 | 1 | 98·15 | 3 | 5 46 27·96 | +3·5543 | +0·0033 | −0·0022 | 483 |
| 484 | 55 Orionis ... ... ... | 5·3 | ... | 95·31 | 4 | 5 46 32·25 | +2·8960 | +0·0025 | −0·0014 | 484 |
| 485 | 15 Leporis ... ... $\delta$ | 3·9 | ... | 95·10 | 3 | 5 47 1·15 | +2·5634 | +0·0024 | +0·0158 | 485 |
| 486 | 136 Tauri ... ... ... ... | 4·7 | ... | 96·76 | 3 | 5 47 2·42 | +3·7701 | +0·0036 | +0·0002 | 486 |
| 487 | 56 Orionis ... ... ... | 5·7 | 2 | 00·10 | 4 | 5 47 14·81 | +3·1154 | +0·0027 | −0·0012 | 487 |
| 488 | 54 Orionis ... ... $\chi^1$ | 4·7 | 1 | 97·45 | 3 | 5 48 27·59 | +3·5655 | +0·0031 | −0·0154 | 488 |
| 489 | Orionis ... ... ... | 6·6 | 1 | 99·11 | 3 | 5 49 0·49 | +3·1476 | +0·0026 | | 489 |
| 490 | 57 Orionis ... ... $\chi^2$ | 5·8 | ... | 98·46 | 3 | 5 49 1·41 | +3·5516 | +0·0030 | −0·0016 | 490 |
| 491 | Orionis ... ... ... | 6·6 | 2 | 99·16 | 3 | 5 49 34·40 | +3·0949 | +0·0025 | | 491 |
| 492 | 58 Orionis ... ... *a* | Var. | ... | 98·75 | 10 | 5 49 45·40 | +3·2459 | +0·0026 | +0·0008 | 492 |
| 493 | Aurigae ... ... ... | 6·4 | ... | 98·46 | 3 | 5 50 12·58 | +3·8109 | +0·0032 | | 493 |
| 494 | Orionis ... ... ... | 5·8 | ... | 98·73 | 3 | 5 50 48·58 | +3·6740 | +0·0029 | | 494 |
| 495 | 139 Tauri ... ... ... ... | 4·7 | ... | 98·47 | 3 | 5 51 47·29 | +3·7226 | +0·0028 | 0·0000 | 495 |

470. Light yellow. 487. Orange-red. 491. Orange. 492. Orange-red. The limits of magnitude are 1 and 1·4; the period is irregular.

| No. | Mean Year and Fraction of Year. | Number of Observations. | Mean N.P.D. | Precess. | Sec. Var. | Proper Motion. | Auwers' Bradley, 1755. | Lalande, 1800. | Weisse's Bessel (1), 1825 | Albany (A. G.), 1875. | Radcliffe, 1890. | Greenwich, 1890. | B.D. | No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ° ′ ″ | ″ | ″ | ″ | | | | | | | ° | |
| 451 | 96·06 | 3 | 71 31 50·8 | −2·820 | +0·509 | −0·008 | 786 | 10409 | | | | 1693 | +18 877 | 451 |
| 452 | 98·46 | 3 | 69 35 47·8 | −2·817 | +0·516 | −0·002 | | 10403 | | | | 1694 | +20 989 | 452 |
| 453 | 02·14 | 3 | 107 53 37·8 | −2·763 | +0·383 | −0·010 | 796 | 10476 | | | 1339 | 1699 | −17 1166 | 453 |
| 454 | 01·12 | 3 | 88 39 41·8 | −2·723 | +0·450 | | | 10465 | | 1800 | | | + 1 1058 | 454 |
| 455 | 99·15 | 3 | 86 18 5·4 | −2·703 | +0·458 | +0·021 | 793 | 10469 | 646 | 1804 | | | + 3 964 | 455 |
| 456 | 98·06 | 3 | 66 1 36·1 | −2·674 | +0·530 | +0·019 | 790 | 10453 | | | | 1702 | +23 954 | 456 |
| 457 | 00·13 | 3 | 91 15 56·0 | −2·519 | +0·441 | −0·006 | 809 | 10563 | | | 1366 | 1717 | − 1 969 | 457 |
| 458 | 98·76 | 3 | 73 1 16·3 | −2·508 | +0·504 | +0·039 | 798 | 10537 | | | | | +16 822 | 458 |
| 459 | 98·80 | 3 | 68 55 5·4 | −2·473 | +0·520 | +0·024 | 800 | 10548 | | | 1368 | 1719 | +21 908 | 459 |
| 460 | 02·14 | 3 | 85 17 34·7 | −2·451 | +0·462 | | | 10585 | 731 | 1818 | | | + 4 989 | 460 |
| 461 | 98·77 | 3 | 60 50 32·3 | −2·362 | +0·553 | | | 10582 | | | | 1727 | +29 947 | 461 |
| 462 | 97·76 | 3 | 64 9 31·6 | −2·310 | +0·539 | +0·014 | 810 | 10605 | | | | 1730 | +25 902 | 462 |
| 463 | 99·14 | 3 | 85 56 7·6 | −2·278 | +0·460 | −0·019 | 813 | 10654 | 789 | 1834 | | 1734 | + 4 1002 | 463 |
| 464 | 99·16 | 3 | 88 33 48·3 | −2·214 | +0·451 | | | 10682 | 817 | 1838 | | | + 1 1088 | 464 |
| 465 | 01·11 | 3 | 84 58 31·0 | −2·145 | +0·463 | | | 10718 | 836 | 1844 | | | + 4 1007 | 465 |
| 466 | 96·11 | 3 | 73 31 3·7 | −2·138 | +0·503 | +0·013 | 817 | 10698* | | | | 1743 | +16 841 | 466 |
| 467 | 02·12 | 3 | 89 42 54·2 | −2·100 | +0·448 | | | 10737 | 854 | | 1390 | | + 0 1152 | 467 |
| 468 | 02·81 | 3 | 124 7 39·1 | −2·094 | +0·316 | +0·030 | | | | | 1393 | 1751 | | 468 |
| 469 | 00·11 | 3 | 86 16 24·5 | −2·081 | +0·459 | | | | 857 | 1849 | | | + 3 1007 | 469 |
| 470 | 00·12 | 3 | 87 40 55·5 | −2·002 | +0·454 | | | 10785 | 889 | 1855 | | | + 2 1040 | 470 |
| 471 | 96·10 | 3 | 66 50 34·1 | −1·987 | +0·529 | | | 10752 | | | | 1755 | +23 1015 | 471 |
| 472 | 01·11 | 3 | 88 34 25·8 | −1·982 | +0·452 | +0·011 | 822 | 10795 | 892 | 1857 | | | + 1 1105 | 472 |
| 473 | 99·09 | 3 | 86 2 2·8 | −1·769 | +0·461 | | | 10869 | 955 | 1875 | | 1759 | + 3 1025 | 473 |
| 474 | 99·12 | 3 | 88 52 0·3 | −1·623 | +0·451 | +0·126 | | 10940 | 990 | 1880 | | | + 1 1126 | 474 |
| 475 | 98·08 | 3 | 72 18 29·7 | −1·608 | +0·509 | −0·001 | 832 | 10918 | | | | 1765 | +17 1004 | 475 |
| 476 | 98·17 | 3 | 65 27 57·2 | −1·497 | +0·536 | +0·010 | 835 | 10966 | | | | 1773 | +24 970 | 476 |
| 477 | 97·33 | 5 | 99 42 17·7 | −1·485 | +0·414 | −0·004 | 844 | 11013 | 1036 | | 1423 | 1774 | − 9 1235 | 477 |
| 478 | 00·05 | 3 | 88 25 28·9 | −1·481 | +0·453 | | | 10996 | | 1901 | | | + 1 1137 | 478 |
| 479 | 00·13 | 3 | 89 18 29·0 | −1·432 | +0·450 | | | 11027 | 1043 | | | | + 0 1184 | 479 |
| 480 | 96·76 | 3 | 62 3 43·4 | −1·341 | +0·551 | | | 11021 | | | | 1778 | +27 888 | 480 |
| 481 | 99·12 | 3 | 85 36 19·7 | −1·318 | +0·463 | | | 11061 | 1083 | 1913 | | | + 4 1052 | 481 |
| 482 | 02·11 | 4 | 88 0 16·1 | −1·285 | +0·455 | | | 11073 | 1096 | 1921 | | | + 1 1148 | 482 |
| 483 | 98·15 | 3 | 70 9 27·5 | −1·184 | +0·518 | −0·034 | | 11088 | | | | 1782 | +19 1110 | 483 |
| 484 | 95·36 | 3 | 97 32 40·9 | −1·177 | +0·422 | −0·003 | 853 | 11114 | | | 1436 | | − 7 1187 | 484 |
| 485 | 95·10 | 3 | 110 53 14·2 | −1·135 | +0·374 | +0·654 | 858 | 11142 | | | 1438 | 1785 | −20 1211 | 485 |
| 486 | 96·76 | 3 | 62 24 39·9 | −1·133 | +0·550 | +0·021 | 848 | 11090 | | | | 1784 | +27 899 | 486 |
| 487 | 99·09 | 3 | 88 10 9·5 | −1·115 | +0·454 | +0·004 | 855 | 11125 | 1138 | 1930 | | | + 1 1151 | 487 |
| 488 | 97·45 | 3 | 69 44 31·9 | −1·009 | +0·520 | +0·096 | 856 | 11133 | | | 1446 | 1790 | +20 1162 | 488 |
| 489 | 99·11 | 3 | 86 47 36·3 | −0·961 | +0·459 | | | 11172 | 1187 | 1940 | | | + 3 1071 | 489 |
| 490 | 98·46 | 3 | 70 16 10·5 | −0·960 | +0·518 | −0·009 | 857 | 11153 | | | 1448 | 1793 | +19 1126 | 490 |
| 491 | 99·16 | 3 | 89 3 1·8 | −0·912 | +0·451 | | | 11189 | 1197 | 1943 | | | + 0 1208 | 491 |
| 492 | 98·76 | 3 | 82 36 40·7 | −0·896 | +0·473 | −0·024 | 860 | 11185 | | | 1452 | 1795 | + 7 1055 | 492 |
| 493 | 98·46 | 3 | 61 4 25·6 | −0·856 | +0·556 | | | 11174 | | | | | +28 952 | 493 |
| 494 | 98·73 | 3 | 65 45 54·0 | −0·804 | +0·536 | | | 11198 | | | | | +24 1033 | 494 |
| 495 | 98·47 | 3 | 64 3 30·2 | −0·718 | +0·543 | +0·009 | 862 | 11220 | | | 1458 | 1810 | +25 1052 | 495 |

452. Authority for Proper Motions: Auwers (Mayer's Sternverzeichnis). (Cape Catalogue, 1880). 474. Authority for Proper Motions: Boss. 468. Authority for Proper Motions: Stone 483. Authority for Proper Motions: Auwers (Berlin A).

| No. | Constellation. | Magnitude. | Number of Estimations. | Mean Year and Fraction of Year. | Number of Observations. | Mean R.A. | Precess. | Sec. Var. | Proper Motion. | No. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | h. m. s. | s. | s. | s. | |
| 496 | Orionis ... ... ... | 8·1 | 1 | 02·12 | 3 | 5 52 8·80 | +3·1893 | +0·0024 | | 496 |
| 497 | Orionis ... ... ... | 6·9 | 1 | 99·15 | 3 | 5 52 44·47 | +3·1010 | +0·0023 | | 497 |
| 498 | Orionis ... ... ... | 7·5 | 1 | 99·09 | 3 | 5 53 1·79 | +3·1158 | +0·0023 | | 498 |
| 499 | 59 Orionis ... ... ... | 6·5 | 1 | 99·09 | 3 | 5 53 12·75 | +3·1154 | +0·0023 | +0·0007 | 499 |
| 500 | 60 Orionis ... ... ... | 6·0 | 2 | 00·15 | 4 | 5 53 41·02 | +3·0854 | +0·0023 | −0·0013 | 500 |
| 501 | Orionis ... ... ... | 7·6 | 1 | 98·79 | 3 | 5 55 35·21 | +3·1407 | +0·0021 | | 501 |
| 502 | Orionis ... ... ... | 6·5 | ... | 99·10 | 3 | 5 57 5·81 | +3·1123 | +0·0021 | | 502 |
| 503 | 64 Orionis ... ... $\chi^3$ | 5·7 | 1 | 96·14 | 3 | 5 57 32·14 | +3·5511 | +0·0020 | +0·0016 | 503 |
| 504 | 62 Orionis ... ... $\chi^4$ | 4·5 | 2 | 97·45 | 3 | 5 57 58·81 | +3·5630 | +0·0019 | 0·0000 | 504 |
| 505 | 1 Geminorum ... ... | 4·1 | ... | 98·53 | 16 | 5 58 2·45 | +3·6476 | +0·0019 | −0·0010 | 505 |
| 506 | 66 Orionis ... ... ... | 6·3 | 2 | 99·13 | 3 | 5 59 41·32 | +3·1700 | +0·0019 | −0·0026 | 506 |
| 507 | Aurigae ... ... ... | 6·3 | ... | 97·47 | 3 | 5 59 59·34 | +3·8297 | +0·0016 | | 507 |
| 508 | Orionis ... ... ... | 7·2 | 2 | 00·15 | 4 | 6 0 13·86 | +3·0872 | +0·0019 | | 508 |
| 509 | 67 Orionis ... ... $\nu$ | 4·2 | ... | 99·72 | 8 | 6 1 51·67 | +3·4254 | +0·0016 | −0·0003 | 509 |
| 510 | Geminorum ... ... | 6·0 | ... | 98·48 | 3 | 6 3 30·60 | +3·6183 | +0·0012 | −0·0043 | 510 |
| 511 | 3 Geminorum ... ... | 5·7 | ... | 98·47 | 3 | 6 3 39·62 | +3·6437 | +0·0012 | +0·0001 | 511 |
| 512 | Orionis ... ... ... | 5·8† | ... | 99·12 | 3 | 6 3 44·68 | +3·1315 | +0·0016 | | 512 |
| 513 | Orionis ... ... ... | 6·8† | ... | 99·12 | 3 | 6 3 46·59 | +3·1313 | +0·0016 | | 513 |
| 514 | Orionis ... ... ... | 6·9 | 1 | 01·13 | 3 | 6 4 35·01 | +3·1402 | +0·0016 | | 514 |
| 515 | Orionis ... ... ... | 7·2 | 1 | 00·12 | 3 | 6 5 9·65 | +3·1409 | +0·0015 | | 515 |
| 516 | Orionis ... ... ... | 8·4* | ... | 02·17 | 3 | 6 5 20·39 | +3·1636 | +0·0015 | | 516 |
| 517 | Leporis ... ... ... | 5·7 | ... | 95·04 | 3 | 6 5 35·95 | +2·5121 | +0·0020 | | 517 |
| 518 | 68 Orionis ... ... ... | 5·7 | ... | 98·45 | 3 | 6 6 5·87 | +3·5542 | +0·0010 | +0·0014 | 518 |
| 519 | Orionis ... ... ... | 6·5 | 1 | 98·10 | 3 | 6 7 40·66 | +3·5251 | +0·0008 | −0·0024 | 519 |
| 520 | Orionis ... ... ... | 6·0 | 2 | 98·81 | 3 | 6 8 38·12 | +3·5050 | +0·0008 | 0·0000 | 520 |
| 521 | 7 Geminorum ... $\eta$ | Var. | ... | 97·03 | 4 | 6 8 50·40 | +3·6270 | +0·0005 | −0·0050 | 521 |
| 522 | 71 Orionis ... ... ... | 5·1 | ... | 98·83 | 3 | 6 8 57·80 | +3·5377 | +0·0007 | −0·0079 | 522 |
| 523 | 44 Aurigae ... ... $\kappa$ | 4·4 | ... | 98·77 | 3 | 6 9 0·29 | +3·8295 | +0·0001 | −0·0052 | 523 |
| 524 | 8 Geminorum ... ... | 6·1 | ... | 98·82 | 3 | 6 10 12·48 | +3·6674 | +0·0002 | −0·0028 | 524 |
| 525 | Monocerotis ... ... | 6·4 | ... | 99·16 | 3 | 6 10 29·67 | +3·1735 | +0·0011 | | 525 |
| 526 | Orionis ... ... ... | 6·5 | ... | 98·48 | 3 | 6 10 35·11 | +3·4864 | +0·0006 | 0·0000 | 526 |
| 527 | Orionis ... ... ... | 7·0 | 1 | 99·17 | 3 | 6 10 43·90 | +3·1007 | +0·0013 | | 527 |
| 528 | Orionis ... ... ... | 7·8* | ... | 02·13 | 3 | 6 11 7·35 | +3·0739 | +0·0013 | | 528 |
| 529 | Orionis ... ... ... | 6·4 | ... | 02·20 | 3 | 6 11 11·16 | +3·0987 | +0·0012 | | 529 |
| 530 | Orionis ... ... ... | 8·1* | ... | 02·44 | 3 | 6 11 52·51 | +3·1129 | +0·0012 | | 530 |
| 531 | Monocerotis ... ... | 5·9 | ... | 02·16 | 3 | 6 11 58·22 | +3·1926 | +0·0010 | −0·0150 | 531 |
| 532 | Orionis ... ... ... | 6·3 | 1 | 98·43 | 3 | 6 13 12·91 | +3·4900 | +0·0003 | | 532 |
| 533 | Aurigae ... ... ... | 6·7 | 1 | 97·68 | 4 | 6 14 48·89 | +3·8301 | −0·0009 | | 533 |
| 534 | Orionis ... ... ... | 6·5 | ... | 98·17 | 3 | 6 15 35·79 | +3·5012 | 0·0000 | +0·0030 | 534 |
| 535 | Orionis ... ... ... | 6·3 | ... | 99·12 | 3 | 6 16 13·16 | +3·1266 | +0·0009 | | 535 |
| 536 | 13 Geminorum ... $\mu$ | 3·3 | 1 | 97·57 | 13 | 6 16 54·60 | +3·6267 | −0·0005 | +0·0037 | 536 |
| 537 | Monocerotis ... ... | 6·9 | ... | 02·13 | 3 | 6 17 28·07 | +3·1720 | +0·0007 | | 537 |
| 538 | Monocerotis ... ... | 7·2 | 1 | 00·17 | 3 | 6 18 2·30 | +3·1616 | +0·0007 | | 538 |
| 539 | 2 Canis Majoris ... $\beta$ | 2·0 | ... | 98·39 | 8 | 6 18 17·71 | +2·6422 | +0·0016 | −0·0015 | 539 |
| 540 | 8 Monocerotis ... ... | 4·0† | ... | 99·13 | 3 | 6 18 28·11 | +3·1810 | +0·0006 | −0·0012 | 540 |

508. Orange. 510. Reddish-orange. 521. The limits of magnitude are 3·2 and 4·2; the period is 231 days.
526. Reddish. 536. Orange-red. 538. A star (B.D.+3° 1218), magnitude 8, precedes about $22^s$, and is slightly south. 540. B.D. magnitude, 4·9; Albany, 4·7.

| No. | Mean Year and Fraction of Year. | Number of Observations. | Mean N.P.D. | Precess. | Sec. Var. | Proper Motion. | Auwers' Bradley, 1755. | Lalande, 1800. | Weisse's Bessel (1), 1825. | Albany (A. G.), 1875. | Radcliffe, 1890. | Greenwich, 1890. | B.D. | No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ° ′ ″ | ″ | ″ | ″ | | | | | | | ° | |
| 496 | 02·12 | 3 | 85 0 40·8 | −0·687 | +0·465 | | | 11263 | 1263 | 1952 | | | + 4 1082 | 496 |
| 497 | 99·15 | 3 | 88 47 13·9 | −0·635 | +0·452 | | | 11288 | 1282 | 1957 | | | + 1 1168 | 497 |
| 498 | 99·09 | 3 | 88 9 14·1 | −0·610 | +0·454 | | | 11301 | 1289 | 1958 | | | + 1 1170 | 498 |
| 499 | 99·09 | 3 | 88 10 21·9 | −0·594 | +0·454 | +0·011 | 869 | 11307 | 1295 | 1959 | | 1823 | + 1 1171 | 499 |
| 500 | 99·15 | 3 | 89 27 22·4 | −0·553 | +0·450 | −0·002 | 870 | 11329 | 1309 | | | | + 0 1239 | 500 |
| 501 | 98·79 | 3 | 87 5 18·5 | −0·386 | +0·458 | | | 11398 | 1358 | 1983 | | | + 2 1106 | 501 |
| 502 | 99·10 | 3 | 88 18 23·9 | −0·254 | +0·454 | | | 11444 | 1403 | 2000 | | | + 1 1195 | 502 |
| 503 | 96·14 | 3 | 70 18 27·3 | −0·216 | +0·518 | +0·012 | 878 | 11433 | | | 1484 | 1842 | +19 1186 | 503 |
| 504 | 97·45 | 3 | 69 51 32·7 | −0·177 | +0·520 | −0·006 | 881 | 11447 | | | 1485 | 1844 | +20 1233 | 504 |
| 505 | 97·29 | 5 | 66 43 52·0 | −0·172 | +0·532 | +0·093 | 880 | 11445 | | | 1486 | 1845 | +23 1170 | 505 |
| 506 | 99·13 | 3 | 85 50 8·1 | −0·027 | +0·462 | +0·013 | 885 | 11527 | 1461 | 2011 | | | + 4 1116 | 506 |
| 507 | 97·47 | 3 | 60 28 46·6 | −0·001 | +0·559 | | | 11501 | | | | 1849 | +29 1112 | 507 |
| 508 | 99·16 | 3 | 89 22 48·2 | +0·020 | +0·450 | | | 11550 | 1482 | | | | + 0 1270 | 508 |
| 509 | 01·12 | 3 | 75 13 9·9 | +0·163 | +0·499 | +0·013 | 887 | 11602 | 1516 | | 1505 | 1859 | +14 1152 | 509 |
| 510 | 98·48 | 3 | 67 47 37·6 | +0·307 | +0·528 | −0·011 | | 11651 | | | | 1868 | +22 1198 | 510 |
| 511 | 98·47 | 3 | 66 52 12·8 | +0·320 | +0·531 | +0·002 | 891 | 11656 | | | | | +23 1226 | 511 |
| 512 | 99·12 | 3 | 87 29 3·9 | +0·328 | +0·456 | | | 11688 | 1586 | 2041 | | 1873 | + 2 1139 | 512 |
| 513 | 99·12 | 3 | 87 29 15·4 | +0·331 | +0·456 | | | 11690 | 1589 | 2042 | | 1874 | + 2 1140 | 513 |
| 514 | 01·13 | 3 | 87 6 40·0 | +0·401 | +0·458 | | | 11715 | 19 | 2049 | | | + 2 1144 | 514 |
| 515 | 00·12 | 3 | 87 4 45·4 | +0·452 | +0·458 | | | 11738 | 48 | 2053 | | | + 2 1147 | 515 |
| 516 | 02·17 | 3 | 86 6 31·9 | +0·467 | +0·461 | | | 11745 | 53 | 2054 | | | + 3 1147 | 516 |
| 517 | 95·04 | 3 | 112 45 25·4 | +0·490 | +0·366 | | | 11784 | | | 1524 | | −22 1330 | 517 |
| 518 | 98·45 | 3 | 70 11 13·0 | +0·534 | +0·518 | +0·002 | 900 | | | | | 1890 | +19 1253 | 518 |
| 519 | 98·10 | 3 | 71 17 35·6 | +0·672 | +0·513 | +0·017 | 3235 | 11791 | | | | 1907 | +18 1129 | 519 |
| 520 | 98·81 | 3 | 72 3 55·6 | +0·755 | +0·510 | +0·020 | | 11839 | | | | 1910 | +17 1182 | 520 |
| 521 | 95·35 | 3 | 67 27 50·3 | +0·773 | +0·528 | +0·003 | 909 | 11842 | | | 1539 | 1911 | +22 1241 | 521 |
| 522 | 98·83 | 3 | 70 48 34·5 | +0·784 | +0·515 | +0·170 | 911 | 11855 | | | 1540 | 1913 | +19 1270 | 522 |
| 523 | 98·77 | 3 | 60 27 54·3 | +0·788 | +0·558 | +0·263 | 907 | 11831 | | | | 1912 | +29 1154 | 523 |
| 524 | 98·82 | 3 | 65 59 50·9 | +0·893 | +0·534 | +0·027 | 914 | 11896 | | | | 1920 | +24 1182 | 524 |
| 525 | 99·16 | 3 | 85 41 3·7 | +0·918 | +0·462 | | | 11927 | 217 | 2090 | | | + 4 1181 | 525 |
| 526 | 98·48 | 3 | 72 47 6·9 | +0·926 | +0·508 | +0·010 | | 11918 | | | | 1924 | +17 1191 | 526 |
| 527 | 99·17 | 3 | 88 47 58·3 | +0·939 | +0·451 | | | 11947 | | 2094 | | 1928 | + 1 1275 | 527 |
| 528 | 02·13 | 3 | 89 57 4·5 | +0·973 | +0·447 | | | | 241 | | | | + 0 1354 | 528 |
| 529 | 02·20 | 3 | 88 53 8·9 | +0·979 | +0·451 | | | 11961 | | 2099 | | | + 1 1278 | 529 |
| 530 | 02·17 | 3 | 88 16 40·1 | +1·039 | +0·453 | | | | 262 | 2102 | | | + 1 1285 | 530 |
| 531 | 02·16 | 3 | 84 52 7·2 | +1·047 | +0·465 | −0·140 | | 12018 | 265 | 2103 | | | + 5 1168 | 531 |
| 532 | 98·43 | 3 | 72 38 7·2 | +1·156 | +0·508 | | | 12007 | | | | 1940 | +17 1203 | 532 |
| 533 | 97·85 | 4 | 60 24 50·1 | +1·295 | +0·557 | | | | | | | | +29 1190 | 533 |
| 534 | 98·17 | 3 | 72 11 24·5 | +1·364 | +0·509 | +0·070 | | 12093 | | | | 1950 | +17 1214 | 534 |
| 535 | 99·12 | 3 | 87 41 6·7 | +1·418 | +0·454 | | | 12146 | 400 | 2129 | | 1951 | + 2 1197 | 535 |
| 536 | 96·43 | 3 | 67 26 6·0 | +1·478 | +0·527 | +0·101 | 929 | 12136 | | | 1574 | 1956 | +22 1304 | 536 |
| 537 | 02·13 | 3 | 85 44 22·4 | +1·527 | +0·461 | | | 12184 | 439 | 2139 | | | + 4 1229 | 537 |
| 538 | 00·17 | 3 | 86 11 6·6 | +1·577 | +0·459 | | | | 456 | 2144 | | 1962 | + 3 1221 | 538 |
| 539 | 00·18 | 3 | 107 54 21·9 | +1·599 | +0·383 | −0·003 | 936 | 12241 | | | 1578 | 1963 | −17 1467 | 539 |
| 540 | 99·13 | 3 | 85 21 21·9 | +1·614 | +0·462 | −0·010 | 931 | 12221 | | 2149 | | 1964 | + 4 1236 | 540 |

510. Authority for Proper Motions: Auwers (Mayer's Sternverzeichnis). 520, 526, 534. Authority for Proper Motions: Auwers (Berlin A). 531. Authority for Proper Motions: Porter.

| No. | Constellation. | Magnitude. | Number of Estimations. | Mean Year and Fraction of Year. | Number of Observations. | Mean R.A. | Precess. | Sec. Var. | Proper Motion. | No. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | h. m. s. | s. | s. | s. | |
| 541 | Monocerotis ... ... | 6·7† | ... | 99·13 | 3 | 6 18 28·54 | +3·1810 | +0·0006 | −0·0012 | 541 |
| 542 | Monocerotis ... ... | 7·1 | ... | 02·17 | 3 | 6 18 33·97 | +3·1360 | +0·0007 | | 542 |
| 543 | Geminorum ... ... | 6·6 | ... | 96·65 | 5 | 6 18 34·12 | +3·6969 | −0·0010 | | 543 |
| 544 | Monocerotis ... T | Var. | 1 | 97·80 | 3 | 6 19 49·07 | +3·2396 | +0·0003 | | 544 |
| 545 | Orionis ... ... ... | 7·2 | 4 | 03·12 | 3 | 6 20 7·61 | +3·1089 | +0·0007 | | 545 |
| 546 | Monocerotis ... ... | 6·3 | ... | 02·17 | 3 | 6 20 33·85 | +3·1268 | +0·0006 | | 546 |
| 547 | Orionis ... ... ... | 6·8 | ... | 01·11 | 3 | 6 20 42·06 | +3·0929 | +0·0007 | | 547 |
| 548 | Orionis ... ... ... | 6·5 | ... | 02·14 | 3 | 6 21 49·47 | +3·0936 | +0·0006 | | 548 |
| 549 | 77 Orionis ... ... ... | 5·4 | ... | 99·15 | 3 | 6 22 5·62 | +3·0810 | +0·0006 | −0·0019 | 549 |
| 550 | Monocerotis ... ... | 5·9 | 2 | 99·14 | 3 | 6 22 6·56 | +3·1417 | +0·0005 | | 550 |
| 551 | 18 Geminorum ... ν | 4·0 | ... | 98·51 | 11 | 6 23 1·51 | +3·5641 | −0·0011 | −0·0022 | 551 |
| 552 | Monocerotis ... ... | 7·5 | 1 | 01·19 | 3 | 6 23 4·93 | +3·1186 | +0·0005 | | 552 |
| 553 | Monocerotis ... ... | 6·4 | ... | 00·17 | 3 | 6 24 1·25 | +3·1357 | +0·0004 | | 553 |
| 554 | Geminorum ... ... | 6·2 | ... | 96·07 | 3 | 6 25 22·26 | +3·4791 | −0·0010 | −0·0012 | 554 |
| 555 | Monocerotis ... ... | 7·4 | 1 | 99·15 | 3 | 6 26 8·04 | +3·1419 | +0·0002 | | 555 |
| 556 | 20 Geminorum ... ... | 6·8 | 3 | 96·80 | 3 | 6 26 27·61 | +3·5003 | −0·0012 | +0·0025 | 556 |
| 557 | 21 Geminorum ... ... | 6·3 | 3 | 96·45 | 3 | 6 26 28·32 | +3·5005 | −0·0012 | +0·0013 | 557 |
| 558 | Monocerotis ... ... | 6·8 | ... | 02·12 | 3 | 6 26 36·66 | +3·1892 | 0·0000 | | 558 |
| 559 | 12 Monocerotis ... ... | 6·8 | 1 | 00·12 | 4 | 6 27 0·74 | +3·1872 | 0·0000 | −0·0038 | 559 |
| 560 | Geminorum ... ... | 8·7 | 3 | 98·48 | 3 | 6 28 38·34 | +3·4569 | −0·0012 | | 560 |
| 561 | 49 Aurigae ... ... ... | 5·1 | ... | 96·80 | 3 | 6 28 54·15 | +3·7808 | −0·0030 | −0·0007 | 561 |
| 562 | Monocerotis ... ... | 7·2 | 1 | 99·14 | 3 | 6 28 54·31 | +3·1416 | 0·0000 | | 562 |
| 563 | Monocerotis ... ... | 7·0 | 2 | 99·16 | 3 | 6 29 16·60 | +3·1898 | −0·0002 | | 563 |
| 564 | Monocerotis ... ... | 5·7 | ... | 00·16 | 4 | 6 30 6·33 | +3·0952 | +0·0001 | | 564 |
| 565 | Monocerotis ... ... | 6·5 | ... | 02·14 | 3 | 6 30 42·21 | +3·1788 | −0·0002 | | 565 |
| 566 | 24 Geminorum ... γ | 2·3 | 1 | 99·17 | 17 | 6 31 56·06 | +3·4645 | −0·0016 | +0·0023 | 566 |
| 567 | 53 Aurigae ... ... ... | 5·6 | ... | 97·44 | 3 | 6 32 2·52 | +3·8086 | −0·0036 | −0·0031 | 567 |
| 568 | Monocerotis ... ... | 6·4 | ... | 01·16 | 3 | 6 32 26·90 | +3·1373 | −0·0002 | | 568 |
| 569 | Monocerotis ... ... | 6·2 | ... | 99·14 | 3 | 6 32 33·83 | +3·1895 | −0·0004 | | 569 |
| 570 | 54 Aurigae ... ... ... | 6·5 | 2 | 97·13 | 3 | 6 33 14·72 | +3·7865 | −0·0037 | −0·0025 | 570 |
| 571 | Monocerotis ... ... | 6·1 | ... | 02·20 | 3 | 6 33 27·01 | +3·1120 | −0·0001 | | 571 |
| 572 | Monocerotis ... ... | 7·2 | 2 | 03·12 | 3 | 6 33 31·11 | +3·1835 | −0·0004 | | 572 |
| 573 | 25 Geminorum ... ... | 6·6 | ... | 96·08 | 3 | 6 35 2·70 | +3·7838 | −0·0039 | −0·0014 | 573 |
| 574 | Monocerotis ... ... | 6·9 | 1 | 99·19 | 4 | 6 35 56·93 | +3·0863 | −0·0002 | −0·0019 | 574 |
| 575 | 26 Geminorum ... ... | 5·3 | 2 | 97·14 | 3 | 6 36 34·92 | +3·4951 | −0·0023 | −0·0009 | 575 |
| 576 | Monocerotis ... ... | 7·0 | ... | 02·15 | 4 | 6 36 49·84 | +3·1498 | −0·0005 | | 576 |
| 577 | 27 Geminorum ... ε | 3·5 | 1 | 96·48 | 3 | 6 37 46·73 | +3·6941 | −0·0037 | −0·0018 | 577 |
| 578 | Monocerotis ... ... | 6·4 | ... | 99·11 | 3 | 6 37 52·11 | +3·1448 | −0·0005 | | 578 |
| 579 | Monocerotis ... ... | 5·8 | ... | 00·18 | 3 | 6 38 22·18 | +3·1656 | −0·0007 | | 579 |
| 580 | 28 Geminorum ... ... | 5·5 | ... | 98·15 | 3 | 6 38 25·21 | +3·8055 | −0·0046 | −0·0015 | 580 |
| 581 | 31 Geminorum ... ξ | 3·5 | ... | 99·79 | 17 | 6 39 40·55 | +3·3768 | −0·0019 | −0·0087 | 581 |
| 582 | Monocerotis ... ... | 7·6 | 1 | 00·18 | 3 | 6 40 15·19 | +3·1809 | −0·0008 | | 582 |
| 583 | 9 Canis Majoris ... a | −1·7 | ... | 03·19 | 2 | 6 40 44·55 | +2·6810 | +0·0010 | −0·0372 | 583 |
| 584 | Geminorum ... ... | 6·7 | 1 | 97·14 | 4 | 6 41 32·86 | +3·5077 | −0·0029 | 0·0000 | 584 |
| 585 | 18 Monocerotis ... ... | 5·0 | 1 | 99·15 | 3 | 6 42 38·71 | +3·1306 | −0·0007 | −0·0020 | 585 |

541. B.D. magnitude, 8·2; Albany, 7·3. 544. 1898 Feb. 7, magnitude 7. The limits are 5·8 and 8·2; the period is 27 days. 552. Harvard magnitude, 6·3; B.D. 7·1. 560. Red. 563. B.D. magnitude, 8·0; Albany, 7·4. 566. Yellowish-green.

| No. | Mean Year and Fraction of Year. | Number of Observations. | Mean N.P.D. | Precess. | Sec. Var. | Proper Motion. | Auwers' Bradley, 1755. | Lalande, 1800. | Weisse's Bessel (1), 1825. | Albany (A. G.), 1875. | Radcliffe, 1890. | Greenwich, 1890. | B.D. | No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ° ′ ″ | ″ | ″ | ″ | | | | | | | ° | |
| 541 | 99·13 | 3 | 85 21 10·2 | +1·615 | +0·462 | −0·010 | 932 | 12222 | | 2150 | | 1965 | + 4 1237 | 541 |
| 542 | 02·17 | 3 | 87 16 58·1 | +1·623 | +0·455 | | | 12226 | | 2151 | | | + 2 1213 | 542 |
| 543 | 97·05 | 3 | 64 53 55·1 | +1·623 | +0·537 | | | 12197 | | | | 1966 | +25 1255 | 543 |
| 544 | 97·80 | 3 | 82 51 34·6 | +1·732 | +0·470 | | | | 507 | | | 1972 | + 7 1273 | 544 |
| 545 | 03·10 | 3 | 88 26 35·7 | +1·759 | +0·451 | | | 12280 | | 2169 | | | + 1 1332 | 545 |
| 546 | 02·17 | 3 | 87 40 17·9 | +1·797 | +0·453 | | | 12300 | | 2175 | | | + 2 1227 | 546 |
| 547 | 01·11 | 3 | 89 7 49·6 | +1·809 | +0·448 | | | | 537 | 2179 | | | + 0 1414 | 547 |
| 548 | 02·14 | 3 | 89 5 58·6 | +1·907 | +0·448 | | | 12350 | 582 | 2193 | | | + 0 1421 | 548 |
| 549 | 99·15 | 3 | 89 38 26·3 | +1·930 | +0·446 | −0·013 | 943 | | 591 | | | | + 0 1426 | 549 |
| 550 | 99·14 | 3 | 87 1 56·3 | +1·932 | +0·455 | | | | | 2195 | | | + 2 1237 | 550 |
| 551 | 98·83 | 3 | 69 43 27·7 | +2·011 | +0·516 | +0·006 | 942 | 12361 | | | 1600 | 1986 | +20 1441 | 551 |
| 552 | 01·19 | 3 | 88 1 28·7 | +2·016 | +0·452 | | | 12385 | 616 | 2201 | | | + 2 1244 | 552 |
| 553 | 00·17 | 3 | 87 17 17·9 | +2·098 | +0·454 | | | 12426 | 642 | 2206 | | | + 2 1253 | 553 |
| 554 | 96·07 | 3 | 72 59 29·1 | +2·215 | +0·503 | +0·088 | | | | | | 1997 | +17 1275 | 554 |
| 555 | 99·15 | 3 | 87 1 10·2 | +2·282 | +0·454 | | | 12502 | | 2225 | | | + 3 1279 | 555 |
| 556 | 96·80 | 3 | 72 8 59·9 | +2·310 | +0·506 | −0·025 | 955 | 12492 | | | | 2005 | +17 1286 | 556 |
| 557 | 96·45 | 3 | 72 8 42·8 | +2·311 | +0·506 | −0·041 | 956 | 12493 | | | | 2006 | +17 1286 | 557 |
| 558 | 02·12 | 4 | 84 59 9·7 | +2·323 | +0·461 | | | | 723 | 2236 | | | + 5 1283 | 558 |
| 559 | 99·11 | 3 | 85 4 19·6 | +2·358 | +0·461 | −0·009 | 957 | 12531 | 739 | 2245 | | | + 4 1304 | 559 |
| 560 | 98·48 | 3 | 73 50 53·5 | +2·499 | +0·499 | | | | | | | | +16 1194 | 560 |
| 561 | 96·80 | 3 | 61 53 58·9 | +2·522 | +0·546 | +0·014 | 959 | 12553 | | | | 2015 | +28 1168 | 561 |
| 562 | 99·14 | 3 | 87 1 34·8 | +2·523 | +0·453 | | | 12596 | | 2260 | | | + 3 1303 | 562 |
| 563 | 99·16 | 3 | 84 57 13·1 | +2·555 | +0·460 | | | 12606 | 805 | 2267 | | | + 5 1306 | 563 |
| 564 | 00·14 | 3 | 89 1 49·4 | +2·627 | +0·446 | | | 12637 | 840 | 2274 | | | + 0 1491 | 564 |
| 565 | 02·14 | 3 | 85 25 14·7 | +2·679 | +0·458 | | | | | 2280 | | | + 4 1335 | 565 |
| 566 | 99·13 | 3 | 73 30 54·6 | +2·785 | +0·499 | +0·035 | 969 | 12680 | | | 1641 | 2028 | +16 1223 | 566 |
| 567 | 97·44 | 3 | 60 55 47·2 | +2·794 | +0·549 | +0·004 | 967 | 12661 | | | | 2029 | +29 1293 | 567 |
| 568 | 01·16 | 3 | 87 12 35·2 | +2·830 | +0·452 | | | 12714 | | 2297 | | | + 2 1315 | 568 |
| 569 | 99·14 | 3 | 84 57 29·7 | +2·840 | +0·459 | | | | 912 | 2301 | | | + 5 1334 | 569 |
| 570 | 97·13 | 3 | 61 38 54·7 | +2·899 | +0·545 | +0·025 | 970 | 12709 | | | | 2038 | +28 1196 | 570 |
| 571 | 02·20 | 3 | 88 17 57·2 | +2·916 | +0·448 | | | 12754 | | 2319 | | | + 1 1443 | 571 |
| 572 | 03·11 | 3 | 85 12 42·1 | +2·922 | +0·458 | | | | 942 | 2320 | | | + 4 1365 | 572 |
| 573 | 96·08 | 3 | 61 42 38·8 | +3·054 | +0·544 | −0·004 | 977 | 12770 | | | | | +28 1207 | 573 |
| 574 | 99·19 | 3 | 89 24 41·1 | +3·133 | +0·443 | −0·012 | | 12855 | 1016 | | | 2047 | + 0 1546 | 574 |
| 575 | 97·14 | 3 | 72 15 23·3 | +3·187 | +0·502 | +0·080 | 982 | 12850 | | | 1665 | 2049 | +17 1357 | 575 |
| 576 | 02·15 | 3 | 86 39 20·6 | +3·209 | +0·452 | | | 12879 | 1041 | 2363 | | | + 3 1359 | 576 |
| 577 | 96·48 | 3 | 64 46 11·2 | +3·291 | +0·530 | +0·005 | 983 | 12880 | | | | 2053 | +25 1406 | 577 |
| 578 | 99·11 | 3 | 86 52 5·6 | +3·298 | +0·451 | | | 12917 | 1074 | 2369 | | | + 3 1371 | 578 |
| 579 | 00·18 | 3 | 85 58 6·3 | +3·341 | +0·454 | | | 12940 | | 2370 | | | + 4 1414 | 579 |
| 580 | 98·15 | 3 | 60 55 40·1 | +3·346 | +0·546 | +0·014 | 986 | 12897 | | | | 2055 | +29 1327 | 580 |
| 581 | 00·15 | 3 | 76 59 46·8 | +3·454 | +0·484 | +0·195 | 989 | 12964 | 1124 | | 1677 | 2058 | +13 1396 | 581 |
| 582 | 00·18 | 3 | 85 18 7·6 | +3·504 | +0·455 | | | 13001 | | 2388 | | | + 4 1429 | 582 |
| 583 | 03·19 | 2 | 106 34 42·9 | +3·546 | +0·383 | +1·199 | 994 | 13035 | | | 1681 | 2062 | −16 1591 | 583 |
| 584 | 97·14 | 4 | 71 41 52·3 | +3·615 | +0·502 | 0·000 | | 13021 | | | | 2063 | +18 1349 | 584 |
| 585 | 99·15 | 3 | 87 28 42·2 | +3·710 | +0·447 | +0·012 | 995 | 13075 | | 2416 | | 2072 | + 2 1397 | 585 |

554, 584. Authority for Proper Motions: Auwers (Berlin A). 574. Authority for Proper Motions: Auwers (Astronomische Nachrichten, 3511). 583. The corrections applied for Orbital Motion are +0ˢ·13 in R.A., and +0″·9 in N.P.D. Authority: Auwers (Astronomische Nachrichten, 3084-5).

| No. | Constellation. | Magnitude. | Number of Estimations. | Mean Year and Fraction of Year. | Number of Observations. | Mean R.A. | Precess. | Sec. Var. | Proper Motion. | No. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | h. m. s. | s. | s. | s. | |
| 586 | Monocerotis ... ... | 7·0 | ... | 02·17 | 3 | 6 42 39·29 | + 3·0830 | — 0·0005 | | 586 |
| 587 | Monocerotis ... ... | 6·1 | ... | 99·09 | 3 | 6 43 53·91 | + 3·0982 | — 0·0007 | | 587 |
| 588 | 33 Geminorum ... ... | 5·8 | ... | 96·08 | 3 | 6 44 4·45 | + 3·4568 | — 0·0028 | — 0·0025 | 588 |
| 589 | 36 Geminorum ... *d* | 5·7 | 1 | 97·80 | 3 | 6 45 33·43 | + 3·5989 | — 0·0040 | — 0·0015 | 589 |
| 590 | Geminorum ... ... | 5·8 | ... | 98·17 | 3 | 6 45 55·74 | + 3·6483 | — 0·0045 | | 590 |
| 591 | 34 Geminorum ... $\theta$ | 3·5 | ... | 98·39 | 4 | 6 46 11·86 | + 3·9589 | — 0·0074 | — 0·0002 | 591 |
| 592 | Monocerotis ... ... | 7·9 | 1 | 99·15 | 3 | 6 46 22·68 | + 3·1361 | — 0·0010 | | 592 |
| 593 | Monocerotis ... ... | 6·2 | ... | 99·21 | 3 | 6 46 24·95 | + 3·1450 | — 0·0010 | | 593 |
| 594 | Monocerotis ... ... | 7·9* | ... | 02·17 | 3 | 6 46 38·96 | + 3·1846 | — 0·0013 | | 594 |
| 595 | 37 Geminorum ... ... | 6·0 | 1 | 98·48 | 3 | 6 49 9·67 | + 3·6957 | — 0·0053 | — 0·0037 | 595 |
| 596 | 14 Canis Majoris ... $\theta$ | 4·3 | ... | 99·76 | 10 | 6 49 32·58 | + 2·7972 | + 0·0003 | — 0·0105 | 596 |
| 597 | Monocerotis ... ... | 7·5 | 1 | 98·83 | 3 | 6 51 24·06 | + 3·1025 | — 0·0011 | 0·0000 | 597 |
| 598 | Monocerotis ... ... | 8·0* | ... | 02·17 | 3 | 6 51 25·67 | + 3·0781 | — 0·0010 | | 598 |
| 599 | 39 Geminorum ... ... | 6·2 | ... | 98·46 | 3 | 6 52 37·67 | + 3·7136 | — 0·0060 | — 0·0134 | 599 |
| 600 | Monocerotis ... ... | 7·7* | ... | 01·15 | 3 | 6 53 1·20 | + 3·1644 | — 0·0016 | | 600 |
| 601 | 40 Geminorum ... ... | 6·3 | ... | 98·76 | 3 | 6 53 17·51 | + 3·7086 | — 0·0060 | — 0·0021 | 601 |
| 602 | Monocerotis ... ... | 6·0 | ... | 99·19 | 3 | 6 53 41·41 | + 3·1577 | — 0·0016 | | 602 |
| 603 | Cephei 51 (Hev.) ... | 5·6 | 3 | 99·15 | 43 | 6 53 44·39 | + 29·7120 | — 2·6204 | — 0·0415 | 603 |
| 604 | 41 Geminorum ... ... | 5·8 | ... | 97·09 | 3 | 6 54 31·02 | + 3·4506 | — 0·0038 | — 0·0021 | 604 |
| 605 | 21 Canis Majoris ... $\epsilon$ | 1·7 | ... | 01·45 | 4 | 6 54 41·67 | + 2·3576 | + 0·0013 | — 0·0011 | 605 |
| 606 | 42 Geminorum ... $\omega$ | 5·2 | ... | 98·09 | 3 | 6 56 19·14 | + 3·6598 | — 0·0060 | — 0·0016 | 606 |
| 607 | Monocerotis ... ... | 7·1 | 1 | 99·20 | 3 | 6 56 23·06 | + 3·1853 | — 0·0019 | | 607 |
| 608 | Geminorum ... ... | 6·2 | ... | 98·49 | 3 | 6 56 36·48 | + 3·4913 | — 0·0044 | + 0·0018 | 608 |
| 609 | Geminorum ... ... | 6·0 | 1 | 98·78 | 3 | 6 56 47·21 | + 3·4645 | — 0·0041 | | 609 |
| 610 | Geminorum ... ... | 6·3 | 1 | 98·83 | 3 | 6 57 9·12 | + 3·8058 | — 0·0077 | + 0·0130 | 610 |
| 611 | 43 Geminorum ... $\zeta$ | Var. | ... | 00·13 | 3 | 6 58 10·66 | + 3·5621 | — 0·0052 | — 0·0011 | 611 |
| 612 | Monocerotis ... ... | 7·0 | ... | 02·20 | 3 | 6 58 21·56 | + 3·1311 | — 0·0016 | | 612 |
| 613 | Monocerotis ... ... | 8·2* | ... | 99·22 | 3 | 6 59 5·00 | + 3·1795 | — 0·0020 | | 613 |
| 614 | Monocerotis ... ... | 6·5 | ... | 99·21 | 3 | 6 59 9·33 | + 3·1096 | — 0·0016 | | 614 |
| 615 | 23 Canis Majoris ... $\gamma$ | 4·1 | ... | 98·17 | 6 | 6 59 14·04 | + 2·7146 | + 0·0005 | — 0·0018 | 615 |
| 616 | 44 Geminorum ... ... | 5·9 | ... | 98·09 | 3 | 6 59 17·14 | + 3·6156 | — 0·0059 | — 0·0010 | 616 |
| 617 | Monocerotis ... ... | 7·6 | 3 | 03·16 | 3 | 7 0 0·81 | + 3·0836 | — 0·0014 | | 617 |
| 618 | Canis Majoris ... ... | 6·4 | ... | 95·42 | 3 | 7 0 31·50 | + 2·5545 | + 0·0009 | | 618 |
| 619 | Monocerotis ... ... | 7·0 | 2 | 98·76 | 3 | 7 1 48·04 | + 3·1869 | — 0·0022 | | 619 |
| 620 | 45 Geminorum ... ... | 5·7 | ... | 96·45 | 3 | 7 2 37·91 | + 3·4440 | — 0·0045 | — 0·0016 | 620 |
| 621 | 25 Canis Majoris ... $\delta$ | 2·1 | ... | 97·39 | 4 | 7 4 19·45 | + 2·4397 | + 0·0011 | — 0·0015 | 621 |
| 622 | 47 Geminorum ... ... | 5·7 | 1 | 96·14 | 3 | 7 5 10·90 | + 3·7271 | — 0·0080 | — 0·0018 | 622 |
| 623 | Monocerotis ... ... | 7·3 | 1 | 99·11 | 3 | 7 5 57·01 | + 3·1479 | — 0·0022 | | 623 |
| 624 | Monocerotis ... ... | 8·2* | ... | 02·19 | 3 | 7 6 10·62 | + 3·1131 | — 0·0020 | | 624 |
| 625 | 48 Geminorum ... ... | 5·8 | ... | 98·18 | 3 | 7 6 21·85 | + 3·6511 | — 0·0072 | — 0·0025 | 625 |
| 626 | 51 Geminorum ... ... | 5·3 | ... | 99·61 | 18 | 7 7 37·73 | + 3·4474 | — 0·0051 | + 0·0003 | 626 |
| 627 | 52 Geminorum ... ... | 6·1 | ... | 97·52 | 3 | 7 8 35·06 | + 3·6700 | — 0·0077 | + 0·0027 | 627 |
| 628 | Monocerotis ... ... | 5·7 | ... | 99·15 | 3 | 7 9 5·65 | + 3·1458 | — 0·0023 | — 0·0097 | 628 |
| 629 | 53 Geminorum ... ... | 5·9 | ... | 98·19 | 3 | 7 9 42·46 | + 3·7529 | — 0·0090 | — 0·0020 | 629 |
| 630 | Canis Minoris ... ... | 8·1* | ... | 02·18 | 3 | 7 9 42·64 | + 3·1838 | — 0·0027 | | 630 |

591. Light green. 603. Reddish-yellow. 609. Orange. 611. The limits of magnitude are 3·7 and 4·5; the period is 10 days. 614. Brighter than No. 607. A star (Albany 2597) one magnitude fainter precedes $4^s$ and is 1′ north. 616. B.D. magnitude, 7·1; Berlin (B), 6·6. 619. Harvard magnitude, 6·0; B.D., 6·5. 626. Orange-red.

| No. | Mean Year and Fraction of Year. | Number of Observations. | Mean N.P.D. | Precess. | Sec. Var. | Proper Motion. | Auwers' Bradley, 1755. | Lalande, 1800. | Weisse's Bessel (1), 1825. | Albany (A. G.), 1875. | Radcliffe, 1890. | Greenwich, 1890. | B.D. | No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ° ′ ″ | ″ | ″ | ″ | | | | | | | ° | |
| 586 | 02·17 | 3 | 89 33 2·6 | +3·711 | +0·440 | | | 13080 | 1220 | | | | +0 1604 | 586 |
| 587 | 99·09 | 3 | 88 53 9·1 | +3·818 | +0·442 | | | 13128 | 1268 | 2432 | | | +1 1531 | 587 |
| 588 | 96·08 | 3 | 73 40 59·5 | +3·833 | +0·493 | −0·025 | 997 | 13108 | | | | | +16 1298 | 588 |
| 589 | 97·80 | 3 | 68 7 15·0 | +3·960 | +0·513 | +0·038 | 1004 | | | | | 2083 | +21 1405 | 589 |
| 590 | 98·17 | 3 | 66 16 47·0 | +3·992 | +0·520 | | | 13171 | | | | 2085 | +23 1518 | 590 |
| 591 | 00·13 | 3 | 55 55 4·6 | +4·015 | +0·564 | +0·032 | 1003 | 13155 | | | 1704 | 2087 | +34 1481 | 591 |
| 592 | 99·15 | 3 | 87 13 46·6 | +4·030 | +0·446 | | | 13221 | 1345 | 2459 | | | +2 1437 | 592 |
| 593 | 99·21 | 3 | 86 50 20·4 | +4·034 | +0·447 | | | 13222 | | 2461 | | | +3 1437 | 593 |
| 594 | 02·17 | 3 | 85 6 58·6 | +4·053 | +0·453 | | | | 1349 | 2465 | | | +4 1476 | 594 |
| 595 | 98·48 | 3 | 64 29 56·0 | +4·268 | +0·525 | −0·011 | 1007 | 13299 | | | | 2101 | +25 1496 | 595 |
| 596 | 00·13 | 3 | 101 54 47·2 | +4·301 | +0·397 | +0·003 | 1011 | 13373 | | | 1720 | 2104 | −11 1681 | 596 |
| 597 | 98·83 | 3 | 88 41 30·9 | +4·460 | +0·439 | +0·560 | | | 1500 | 2511 | | | +1 1600 | 597 |
| 598 | 02·17 | 3 | 89 45 50·1 | +4·462 | +0·436 | | | 13426 | | | | | +0 1717 | 598 |
| 599 | 98·46 | 3 | 63 47 14·7 | +4·564 | +0·525 | −0·083 | 1013 | | | | | 2118 | +26 1405 | 599 |
| 600 | 01·15 | 3 | 85 58 12·7 | +4·598 | +0·447 | | | 13475 | | 2528 | | | +4 1522 | 600 |
| 601 | 98·76 | 3 | 63 56 59·6 | +4·621 | +0·524 | +0·013 | 1015 | | | | | 2120 | +26 1411 | 601 |
| 602 | 99·19 | 3 | 86 15 43·5 | +4·655 | +0·446 | | | 13491 | 1575 | 2533 | | | +3 1488 | 602 |
| 603 | 99·69 | 35 | 2 47 39·5 | +4·659 | +4·212 | +0·050 | | | | | 1716 | 2102 | +87 51 | 603 |
| 604 | 97·09 | 3 | 73 46 57·8 | +4·725 | +0·487 | −0·013 | 1020 | 13512 | | | | 2124 | +16 1354 | 604 |
| 605 | 02·21 | 3 | 118 50 7·2 | +4·740 | +0·332 | −0·017 | 1023 | | | | 1740 | 2126 | | 605 |
| 606 | 98·09 | 3 | 65 38 30·8 | +4·878 | +0·516 | −0·004 | 1021 | 13559 | | | | 2128 | +24 1502 | 606 |
| 607 | 99·20 | 3 | 85 2 23·9 | +4·884 | +0·448 | | | 13589 | 1664 | 2571 | | | +5 1513 | 607 |
| 608 | 98·49 | 3 | 72 6 7·8 | +4·903 | +0·492 | −0·034 | | 13577 | | | | | +17 1479 | 608 |
| 609 | 98·78 | 3 | 73 10 54·4 | +4·918 | +0·488 | | | | | | | 2131 | +16 1363 | 609 |
| 610 | 98·83 | 3 | 60 29 42·4 | +4·949 | +0·536 | +0·800 | | 13576 | | | | 2134 | +29 1441 | 610 |
| 611 | 00·13 | 3 | 69 16 58·6 | +5·036 | +0·501 | −0·001 | 1024 | 13635 | | | 1759 | 2141 | +20 1687 | 611 |
| 612 | 02·20 | 3 | 87 24 57·7 | +5·051 | +0·440 | | | 13667 | 1734 | 2589 | | | +2 1530 | 612 |
| 613 | 99·22 | 3 | 85 16 45·6 | +5·112 | +0·446 | | | | | 2596 | | | +4 1567 | 613 |
| 614 | 99·21 | 3 | 88 21 47·0 | +5·119 | +0·436 | | | 13695 | | 2599 | | | +1 1665 | 614 |
| 615 | 02·18 | 3 | 105 29 8·2 | +5·125 | +0·381 | +0·003 | 1028 | 13717 | | | 1765 | 2145 | −15 1625 | 615 |
| 616 | 98·09 | 3 | 67 12 46·1 | +5·130 | +0·508 | +0·005 | 1025 | | | | | 2144 | +22 1566 | 616 |
| 617 | 03·16 | 3 | 89 31 10·6 | +5·191 | +0·432 | | | | 1795 | | | | +0 1791 | 617 |
| 618 | 95·42 | 3 | 111 52 47·7 | +5·234 | +0·357 | | | 13773 | | | 1769 | | −21 1732 | 618 |
| 619 | 98·76 | 3 | 84 56 4·3 | +5·342 | +0·446 | | | 13781 | | 2624 | | | +5 1543 | 619 |
| 620 | 96·45 | 3 | 73 54 33·4 | +5·412 | +0·481 | +0·104 | 1030 | 13796 | | | | 2155 | +16 1397 | 620 |
| 621 | 97·46 | 3 | 116 14 4·6 | +5·554 | +0·339 | −0·007 | 1042 | | | | 1781 | 2159 | | 621 |
| 622 | 96·14 | 3 | 62 58 44·1 | +5·627 | +0·519 | +0·045 | 1034 | | | | | 2165 | +27 1327 | 622 |
| 623 | 99·11 | 3 | 86 38 39·1 | +5·691 | +0·438 | | | 13932 | 77 | 2672 | | | +3 1584 | 623 |
| 624 | 02·18 | 3 | 88 11 48·0 | +5·710 | +0·433 | | | 13943 | | 2675 | | | +1 1722 | 624 |
| 625 | 98·18 | 3 | 65 42 14·5 | +5·726 | +0·508 | +0·037 | 1038 | 13920 | | | | 2168 | +24 1558 | 625 |
| 626 | 99·17 | 4 | 73 40 15·4 | +5·832 | +0·478 | +0·033 | 1046 | 13977 | | | 1804 | 2172 | +16 1417 | 626 |
| 627 | 97·52 | 3 | 64 56 28·5 | +5·912 | +0·509 | +0·105 | 1049 | 14003 | | | | 2177 | +25 1618 | 627 |
| 628 | 99·15 | 3 | 86 43 2·0 | +5·954 | +0·435 | −0·030 | | 14049 | 193 | 2694 | | 2178 | +3 1609 | 628 |
| 629 | 98·19 | 3 | 61 55 41·5 | +6·005 | +0·520 | +0·006 | 1050 | 14033 | | | | 2180 | +28 1350 | 629 |
| 630 | 02·18 | 3 | 85 1 14·3 | +6·006 | +0·440 | | | 14070 | | 2701 | | | +5 1602 | 630 |

597. Authority for Proper Motions: Radcliffe (special computation) in R.A., and Porter in N.P.D. 603. Authority for Proper Motions: Auwers (Fundamental-Catalog). 608. Authority for Proper Motions: Auwers (Berlin A). 610. Authority for Proper Motions: Porter. 628. Authority for Proper Motions: Boss.

| No. | Constellation. | Magnitude. | Number of Estimations. | Mean Year and Fraction of Year. | Number of Observations. | Mean R.A. | Precess. | Sec. Var. | Proper Motion. | No. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | h. m. s. | s. | s. | s. | |
| 631 | 24 Monocerotis ... ... | 7·1 | 2 | 99·13 | 3 | 7 10 12·30 | + 3·0730 | — 0·0018 | — 0·0020 | 631 |
| 632 | Geminorum ... ... | 6·5 | ... | 98·22 | 3 | 7 10 51·73 | + 3·7179 | — 0·0087 | + 0·0050 | 632 |
| 633 | 54 Geminorum ... λ | 3·7 | ... | 97·51 | 3 | 7 12 20·73 | + 3·4545 | — 0·0056 | — 0·0039 | 633 |
| 634 | Canis Minoris ... ... | 6·6 | 2 | 99·17 | 3 | 7 14 8·81 | + 3·1375 | — 0·0026 | | 634 |
| 635 | 55 Geminorum ... δ | 3·3 | 2 | 98·35 | 13 | 7 14 9·04 | + 3·5891 | — 0·0074 | — 0·0025 | 635 |
| 636 | Canis Minoris ... ... | 7·6 | 1 | 99·21 | 3 | 7 14 46·70 | + 3·1312 | — 0·0025 | | 636 |
| 637 | Monocerotis ... ... | 7·3 | 2 | 99·23 | 3 | 7 15 22·66 | + 3·0857 | — 0·0022 | | 637 |
| 638 | Canis Minoris ... ... | 7·4 | 1 | 00·16 | 3 | 7 15 28·30 | + 3·1560 | — 0·0028 | | 638 |
| 639 | 56 Geminorum ... ... | 5·3 | ... | 97·54 | 3 | 7 16 2·79 | + 3·5486 | — 0·0071 | — 0·0053 | 639 |
| 640 | Monocerotis ... ... | 6·9 | 1 | 99·17 | 3 | 7 16 55·47 | + 3·0808 | — 0·0022 | | 640 |
| 641 | Monocerotis ... ... | 6·6 | ... | 99·19 | 3 | 7 17 18·97 | + 3·0924 | — 0·0023 | + 0·0027 | 641 |
| 642 | 57 Geminorum ... A | 5·1 | ... | 98·21 | 3 | 7 17 22·75 | + 3·6674 | — 0·0089 | — 0·0063 | 642 |
| 643 | 58 Geminorum ... ... | 6·0 | ... | 98·48 | 3 | 7 17 27·65 | + 3·6117 | — 0·0081 | — 0·0037 | 643 |
| 644 | Canis Minoris ... ... | 8·0* | ... | 99·22 | 3 | 7 19 3·85 | + 3·1469 | — 0·0029 | | 644 |
| 645 | 60 Geminorum ... ι | 3·8 | ... | 98·79 | 3 | 7 19 30·87 | + 3·7411 | — 0·0103 | — 0·0097 | 645 |
| 646 | Canis Minoris ... ... | 8·0* | ... | 02·20 | 3 | 7 20 8·75 | + 3·1836 | — 0·0033 | | 646 |
| 647 | 61 Geminorum ... ... | 5·8 | ... | 98·51 | 3 | 7 21 2·71 | + 3·5406 | — 0·0076 | — 0·0019 | 647 |
| 648 | 3 Canis Minoris ... β | 3·1 | ... | 98·62 | 14 | 7 21 43·66 | + 3·2598 | — 0·0042 | — 0·0042 | 648 |
| 649 | 63 Geminorum ... ... | 5·3 | ... | 98·53 | 3 | 7 21 48·26 | + 3·5699 | — 0·0081 | — 0·0049 | 649 |
| 650 | Canis Minoris ... ... | 7·7* | ... | 99·20 | 3 | 7 22 8·15 | + 3·1089 | — 0·0027 | | 650 |
| 651 | 64 Geminorum ... $b^1$ | 5·0 | ... | 96·47 | 3 | 7 23 6·63 | + 3·7464 | — 0·0109 | — 0·0039 | 651 |
| 652 | Canis Minoris ... ... | 7·6 | 1 | 99·19 | 3 | 7 23 29·36 | + 3·1270 | — 0·0029 | | 652 |
| 653 | 65 Geminorum ... $b^2$ | 5·0 | ... | 00·19 | 5 | 7 23 35·56 | + 3·7402 | — 0·0109 | — 0·0022 | 653 |
| 654 | Canis Minoris ... ... | 7·3 | 1 | 99·14 | 3 | 7 25 11·06 | + 3·1493 | — 0·0032 | | 654 |
| 655 | Canis Minoris ... ... | 7·0 | ... | 99·17 | 3 | 7 25 16·63 | + 3·1264 | — 0·0030 | | 655 |
| 656 | Canis Minoris ... ... | 8·0* | ... | 02·20 | 3 | 7 25 49·50 | + 3·0806 | — 0·0026 | | 656 |
| 657 | Geminorum ... ... | 5·7 | ... | 97·94 | 4 | 7 26 2·42 | + 3·4601 | — 0·0070 | + 0·0012 | 657 |
| 658 | Canis Minoris ... ... | 6·7 | ... | 99·21 | 3 | 7 26 49·37 | + 3·1364 | — 0·0032 | | 658 |
| 659 | Geminorum ... ... | 7·0 | 1 | 98·15 | 3 | 7 26 51·04 | + 3·6025 | — 0·0091 | | 659 |
| 660 | 7 Canis Minoris ... $\delta^1$ | 6·3 | 1 | 99·23 | 3 | 7 26 54·32 | + 3·1189 | — 0·0030 | — 0·0024 | 660 |
| 661 | 8 Canis Minoris ... $\delta^2$ | 6·6 | 1 | 99·14 | 3 | 7 27 57·09 | + 3·1486 | — 0·0034 | — 0·0018 | 661 |
| 662 | 66 Geminorum ... $a^1$ | 2·8 | ... | 00·09 | 5 | 7 28 12·78 | + 3·8502 | — 0·0136 | — 0·0151 | 662 |
| 663 | 66 Geminorum ... $a^2$ | 2·0 | ... | 00·29 | 9 | 7 28 13·19 | + 3·8502 | — 0·0136 | — 0·0151 | 663 |
| 664 | 9 Canis Minoris ... $\delta^3$ | 6·7 | 1 | 99·19 | 3 | 7 29 1·00 | + 3·1503 | — 0·0034 | — 0·0032 | 664 |
| 665 | Canis Minoris ... ... | 6·5 | ... | 02·20 | 3 | 7 29 32·90 | + 3·1363 | — 0·0033 | | 665 |
| 666 | Canis Minoris ... ... | 7·1 | ... | 99·20 | 3 | 7 29 42·39 | + 3·1734 | — 0·0037 | | 666 |
| 667 | Canis Minoris ... ... | 7·3 | 1 | 99·14 | 3 | 7 29 43·07 | + 3·1482 | — 0·0035 | | 667 |
| 668 | 69 Geminorum ... υ | 4·3 | ... | 97·14 | 3 | 7 29 45·60 | + 3·7055 | — 0·0112 | — 0·0023 | 668 |
| 669 | Canis Minoris ... ... | 6·8 | ... | 02·20 | 3 | 7 32 29·88 | + 3·1189 | — 0·0033 | | 669 |
| 670 | Canis Minoris ... ... | 6·9 | ... | 99·20 | 3 | 7 33 21·74 | + 3·0884 | — 0·0030 | | 670 |
| 671 | 74 Geminorum ... f | 5·3 | ... | 97·13 | 3 | 7 33 42·01 | + 3·4690 | — 0·0079 | — 0·0019 | 671 |
| 672 | 10 Canis Minoris ... a | 0·5 | ... | 98·62 | 12 | 7 34 4·02 | + 3·1903 | — 0·0042 | — 0·0474 | 672 |
| 673 | Geminorum ... ... | 6·3 | .. | 98·16 | 3 | 7 34 59·29 | + 3·5984 | — 0·0101 | | 673 |
| 674 | Canis Minoris ... ... | 7·2 | 1 | 99·21 | 3 | 7 35 32·91 | + 3·1647 | — 0·0039 | — 0·0041 | 674 |
| 675 | Canis Minoris ... ... | 6·5 | 1 | 00·77 | 5 | 7 36 19·86 | + 3·1550 | — 0·0038 | | 675 |

635. Companion, magnitude 8·8, precedes south. 662, 663. The magnitudes given in the Harvard Photometry for these stars should be interchanged. 668. Orange-red.

| No. | Mean Year and Fraction of Year. | Number of Observations. | Mean N.P.D. | Precess. | Sec. Var. | Proper Motion. | Auwers' Bradley, 1755. | Lalande, 1800. | Weisse's Bessel (1), 1825. | Albany (A.G.), 1875. | Radcliffe, 1890. | Greenwich, 1890. | B.D. | No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ° ′ ″ | ″ | ″ | ″ | | | | | | | ° | |
| 631 | 99·13 | 3 | 89 59 15·1 | +6·047 | +0·425 | −0·008 | 1055 | 14093 | | | 1814 | | + 0 1871 | 631 |
| 632 | 98·22 | 3 | 63 7 48·9 | +6·101 | +0·514 | +0·170 | | 14080 | | | | 2186 | +26 1508 | 632 |
| 633 | 97·51 | 3 | 73 16 44·5 | +6·225 | +0·476 | +0·026 | 1058 | 14139 | | | 1824 | 2189 | +16 1443 | 633 |
| 634 | 99·17 | 3 | 87 4 33·9 | +6·375 | +0·431 | | | 14234 | 350 | 2746 | | | + 2 1640 | 634 |
| 635 | 96·50 | 5 | 67 49 59·9 | +6·375 | +0·494 | −0·003 | 1062 | 14197 | | | 1835 | 2195 | +22 1645 | 635 |
| 636 | 99·21 | 3 | 87 21 16·9 | +6·428 | +0·430 | | | 14250 | 364 | 2752 | | | + 2 1644 | 636 |
| 637 | 99·23 | 3 | 89 24 38·3 | +6·477 | +0·423 | | | 14272 | 389 | | | | + 0 1909 | 637 |
| 638 | 00·16 | 3 | 86 13 55·2 | +6·485 | +0·433 | | | | 390 | 2762 | | | + 3 1649 | 638 |
| 639 | 97·54 | 3 | 69 22 2·7 | +6·532 | +0·487 | +0·008 | 1065 | 14267 | | | | 2207 | +20 1775 | 639 |
| 640 | 99·17 | 3 | 89 38 1·1 | +6·605 | +0·421 | | | 14328 | 432 | | | | + 0 1915 | 640 |
| 641 | 99·19 | 3 | 89 6 26·8 | +6·637 | +0·423 | +0·080 | | 14340 | 448 | 2791 | | | + 0 1916 | 641 |
| 642 | 98·21 | 3 | 64 45 25·0 | +6·642 | +0·502 | +0·017 | 1068 | 14310 | | | | 2210 | +25 1660 | 642 |
| 643 | 98·48 | 3 | 66 51 42·9 | +6·649 | +0·494 | +0·034 | 1070 | 14315 | | | | 2211 | +23 1698 | 643 |
| 644 | 99·22 | 3 | 86 37 38·9 | +6·781 | +0·429 | | | 14395 | 497 | 2804 | | | + 3 1670 | 644 |
| 645 | 98·79 | 3 | 62 0 10·2 | +6·819 | +0·510 | +0·075 | 1072 | 14378 | | | | 2220 | +28 1385 | 645 |
| 646 | 02·20 | 3 | 84 57 9·9 | +6·871 | +0·433 | | | | 533 | 2816 | | | + 5 1652 | 646 |
| 647 | 98·51 | 3 | 69 32 33·1 | +6·944 | +0·481 | +0·011 | 1076 | 14426 | | | 1864 | 2228 | +20 1805 | 647 |
| 648 | 00·17 | 3 | 81 30 32·3 | +7·000 | +0·443 | +0·030 | 1079 | 14466 | 573 | | 1872 | 2230 | + 8 1774 | 648 |
| 649 | 98·53 | 3 | 68 20 59·3 | +7·006 | +0·485 | +0·101 | 1077 | | | | 1874 | 2231 | +21 1602 | 649 |
| 650 | 99·20 | 3 | 88 20 45·4 | +7·034 | +0·422 | | | 14497 | 598 | 2833 | | | + 1 1811 | 650 |
| 651 | 96·47 | 3 | 61 40 31·9 | +7·113 | +0·508 | +0·053 | 1080 | 14494 | | | | | +28 1396 | 651 |
| 652 | 99·19 | 3 | 87 30 41·3 | +7·145 | +0·423 | | | | | 2848 | | | + 2 1681 | 652 |
| 653 | 98·23 | 3 | 61 52 38·1 | +7·153 | +0·507 | +0·018 | 1082 | 14513 | | | | 2239 | +28 1400 | 653 |
| 654 | 99·14 | 3 | 86 29 5·2 | +7·283 | +0·425 | | | 14603 | 694 | 2859 | | | + 3 1701 | 654 |
| 655 | 99·17 | 3 | 87 31 45·8 | +7·290 | +0·422 | | | | 700 | 2860 | | | + 2 1685 | 655 |
| 656 | 02·20 | 3 | 89 38 5·4 | +7·335 | +0·415 | | | | 717 | | | | + 0 1971 | 656 |
| 657 | 97·94 | 4 | 72 42 3·9 | +7·352 | +0·466 | +0·078 | | 14620 | | | | | +17 1596 | 657 |
| 658 | 99·21 | 3 | 87 3 45·1 | +7·416 | +0·422 | | | 14666 | 751 | 2878 | | | + 3 1708 | 658 |
| 659 | 98·15 | 3 | 66 53 56·7 | +7·418 | +0·485 | | | | | | | 2246 | +23 1744 | 659 |
| 660 | 99·23 | 3 | 87 52 24·8 | +7·423 | +0·419 | −0·023 | 1088 | 14672 | 754 | 2880 | | | + 2 1691 | 660 |
| 661 | 99·14 | 3 | 86 29 48·2 | +7·508 | +0·423 | −0·038 | 1092 | | 790 | 2891 | | | + 3 1715 | 661 |
| 662 | 01·64 | 3 | 57 53 35·3 | +7·530 | +0·517 | +0·079 | 1087 | 14673 | | | 1910 | 2250 | +32 1581 | 662 |
| 663 | 00·38 | 3 | 57 53 31·4 | +7·530 | +0·517 | +0·079 | 1087 | 14673 | | | 1911 | 2251 | +32 1581 | 663 |
| 664 | 99·19 | 3 | 86 24 40·8 | +7·594 | +0·422 | −0·002 | 1095 | | 815 | 2900 | | | + 3 1719 | 664 |
| 665 | 02·20 | 3 | 87 3 23·0 | +7·637 | +0·420 | | | 14769 | 829 | 2905 | | | + 3 1723 | 665 |
| 666 | 99·20 | 3 | 85 20 31·0 | +7·650 | +0·424 | | | 14774 | 834 | 2907 | | | + 4 1751 | 666 |
| 667 | 99·14 | 3 | 86 30 22·3 | +7·651 | +0·421 | | | | 836 | 2908 | | | + 3 1725 | 667 |
| 668 | 97·14 | 3 | 62 52 54·3 | +7·654 | +0·496 | +0·101 | 1094 | 14744 | | | | 2259 | +27 1424 | 668 |
| 669 | 02·20 | 3 | 87 50 49·2 | +7·875 | +0·415 | | | 14880 | 927 | 2932 | | | + 2 1720 | 669 |
| 670 | 99·20 | 3 | 89 16 6·8 | +7·945 | +0·410 | | | 14904 | 957 | 2938 | | | + 0 2026 | 670 |
| 671 | 97·13 | 3 | 72 5 50·8 | +7·972 | +0·461 | −0·018 | 1103 | 14894 | | | 1938 | 2280 | +18 1701 | 671 |
| 672 | 99·47 | 8 | 84 31 6·9 | +8·001 | +0·423 | +1·027 | 1106 | 14914 | 977 | | 1941 | 2281 | + 5 1739 | 672 |
| 673 | 98·16 | 3 | 66 45 0·4 | +8·075 | +0·477 | | | 14921 | | | | | +23 1780 | 673 |
| 674 | 99·21 | 3 | 85 41 39·2 | +8·120 | +0·419 | +0·089 | | 14950 | 1022 | 2958 | | | + 4 1781 | 674 |
| 675 | 99·17 | 3 | 86 8 29·9 | +8·182 | +0·417 | | | 14970 | 1045 | 2964 | | | + 3 1758 | 675 |

632, 641, 674. Authority for Proper Motions: Porter. 657. Authority for Proper Motions: Auwers (Berlin A).
672. The corrections applied for Orbital Motion are −0ˢ·06 in R.A., and −0″·6 in N.P.D. Authority: Auwers (Astronomische Nachrichten, 1371–3).

| No. | Constellation. | Magnitude. | Number of Estimations. | Mean Year and Fraction of Year. | Number of Observations. | Mean R.A. | Precess. | Sec. Var. | Proper Motion. | No. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | h. m. s. | s. | s. | s. | |
| 676 | Monocerotis ... ... | 6·4 | ... | 99·22 | 3 | 7 37 57·40 | + 3·0817 | — 0·0031 | | 676 |
| 677 | 76 Geminorum ... *c* | 5·5 | ... | 97·53 | 3 | 7 38 0·96 | + 3·6666 | — 0·0117 | — 0·0028 | 677 |
| 678 | 77 Geminorum ... *κ* | 3·6 | ... | 98·19 | 3 | 7 38 24·66 | + 3·6302 | — 0·0110 | — 0·0034 | 678 |
| 679 | Canis Minoris ... ... | 6·3 | ... | 00·94 | 4 | 7 38 55·06 | + 3·1288 | — 0·0037 | | 679 |
| 680 | 78 Geminorum ... *β* | 1·3 | ... | 99·29 | 14 | 7 39 11·78 | + 3·7252 | — 0·0129 | — 0·0481 | 680 |
| 681 | 79 Geminorum ... ... | 6·7 | 1 | 98·22 | 3 | 7 39 17·12 | + 3·5277 | — 0·0093 | — 0·0037 | 681 |
| 682 | 81 Geminorum ... *g* | 5·0 | ... | 98·20 | 3 | 7 40 20·06 | + 3·4838 | — 0·0087 | — 0·0062 | 682 |
| 683 | Canis Minoris ... ... | 7·6 | 1 | 00·80 | 5 | 7 41 25·71 | + 3·1171 | — 0·0036 | | 683 |
| 684 | 82 Geminorum ... ... | 6·3 | ... | 97·86 | 3 | 7 42 34·92 | + 3·5939 | — 0·0109 | — 0·0019 | 684 |
| 685 | Canis Minoris ... ... | 7·0 | 1 | 01·16 | 7 | 7 43 42·40 | + 3·1691 | — 0·0044 | | 685 |
| 686 | 7 Argûs ... ... ... *ξ* | 3·5 | ... | 99·63 | 11 | 7 45 5·26 | + 2·5237 | + 0·0009 | — 0·0011 | 686 |
| 687 | Canis Minoris ... ... | 6·3 | ... | 00·19 | 4 | 7 45 32·55 | + 3·1466 | — 0·0042 | | 687 |
| 688 | Canis Minoris ... ... | 6·6 | ... | 99·22 | 3 | 7 45 34·34 | + 3·1714 | — 0·0045 | | 688 |
| 689 | Monocerotis ... ... | 6·6 | ... | 00·19 | 3 | 7 45 45·51 | + 3·0797 | — 0·0034 | | 689 |
| 690 | 13 Canis Minoris ... *ζ* | 6·0 | 1 | 99·18 | 3 | 7 46 30·77 | + 3·1149 | — 0·0038 | — 0·0036 | 690 |
| 691 | Canis Minoris ... ... | 6·6 | ... | 99·19 | 3 | 7 46 52·41 | + 3·1465 | — 0·0042 | | 691 |
| 692 | 83 Geminorum ... *φ* | 5·7 | 1 | 96·17 | 3 | 7 47 22·54 | + 3·6811 | — 0·0132 | — 0·0023 | 692 |
| 693 | 85 Geminorum ... ... | 5·3 | ... | 97·21 | 3 | 7 49 49·77 | + 3·5079 | — 0·0101 | — 0·0028 | 693 |
| 694 | Canis Minoris ... ... | 6·6 | 1 | 99·67 | 4 | 7 51 7·07 | + 3·1710 | — 0·0047 | | 694 |
| 695 | 1 Cancri ... ... ... | 6·0 | ... | 98·17 | 3 | 7 51 18·77 | + 3·4130 | — 0·0085 | — 0·0030 | 695 |
| 696 | Canis Minoris ... ... | 7·0 | 1 | 99·19 | 3 | 7 52 7·41 | + 3·1014 | — 0·0039 | — 0·0130 | 696 |
| 697 | Cancri ... ... ... | 6·0 | ... | 98·22 | 3 | 7 52 49·15 | + 3·4282 | — 0·0089 | — 0·0014 | 697 |
| 698 | 14 Canis Minoris ... ... | 5·5 | ... | 00·20 | 4 | 7 53 9·53 | + 3·1239 | — 0·0042 | — 0·0123 | 698 |
| 699 | Cancri ... ... ... | 6·5 | ... | 02·20 | 3 | 7 53 16·70 | + 3·1386 | — 0·0044 | | 699 |
| 700 | 2 Cancri ... ... $\omega^1$ | 6·3 | 1 | 97·88 | 3 | 7 54 52·77 | + 3·6361 | — 0·0133 | — 0·0011 | 700 |
| 701 | Cancri ... ... ... | 6·4 | ... | 98·51 | 3 | 7 55 2·51 | + 3·5910 | — 0·0123 | — 0·0040 | 701 |
| 702 | 3 Cancri ... ... ... | 5·7 | ... | 98·50 | 3 | 7 55 3·50 | + 3·4441 | — 0·0094 | — 0·0022 | 702 |
| 703 | 5 Cancri ... ... ... | 5·9 | ... | 98·51 | 3 | 7 55 48·33 | + 3·4243 | — 0·0091 | — 0·0018 | 703 |
| 704 | Canis Minoris ... ... | 5·6 | ... | 02·44 | 4 | 7 55 56·51 | + 3·1782 | — 0·0051 | | 704 |
| 705 | Canis Minoris ... ... | 7·5 | 1 | 99·19 | 3 | 7 56 53·91 | + 3·1387 | — 0·0045 | | 705 |
| 706 | Canis Minoris ... ... | 5·0 | 1 | 99·22 | 3 | 7 57 3·77 | + 3·1259 | — 0·0044 | — 0·0024 | 706 |
| 707 | 6 Cancri ... ... ... | 5·2 | 2 | 97·17 | 10 | 7 57 22·60 | + 3·6943 | — 0·0149 | — 0·0025 | 707 |
| 708 | 7 Cancri ... ... ... | 6·3 | 1 | 98·54 | 3 | 7 57 56·26 | + 3·5512 | — 0·0118 | — 0·0051 | 708 |
| 709 | Ursae Minoris ... ... | 7·1 | 1 | 00·78 | 27 | 7 58 2·49 | + 65·5480 | — 32·9572 | — 0·1198 | 709 |
| 710 | 9 Cancri ... ... $\mu^1$ | 6·2 | ... | 98·22 | 3 | 8 0 22·91 | + 3·5618 | — 0·0123 | — 0·0028 | 710 |
| 711 | Canis Minoris ... ... | 7·3 | 2 | 99·19 | 3 | 8 0 35·76 | + 3·1222 | — 0·0044 | | 711 |
| 712 | Monocerotis ... ... | 6·4 | ... | 02·44 | 4 | 8 0 43·23 | + 3·0669 | — 0·0037 | | 712 |
| 713 | Canis Minoris ... ... | 7·9* | ... | 02·22 | 3 | 8 1 3·95 | + 3·1022 | — 0·0042 | | 713 |
| 714 | 10 Cancri ... ... $\mu^2$ | 5·5 | ... | 97·90 | 3 | 8 1 52·78 | + 3·5352 | — 0·0119 | + 0·0012 | 714 |
| 715 | 12 Cancri ... ... ... | 6·2 | ... | 98·18 | 3 | 8 3 7·07 | + 3·3576 | — 0·0084 | — 0·0008 | 715 |
| 716 | 15 Argûs ... ... ... *ρ* | 2·9 | ... | 98·90 | 14 | 8 3 17·07 | + 2·5612 | + 0·0010 | — 0·0075 | 716 |
| 717 | 14 Cancri ... ... $\psi^2$ | 5·9 | ... | 98·22 | 3 | 8 4 25·85 | + 3·6263 | — 0·0142 | — 0·0072 | 717 |
| 718 | Cancri ... ... ... | 6·1 | ... | 98·21 | 3 | 8 5 21·79 | + 3·3770 | — 0·0090 | — 0·0028 | 718 |
| 719 | Hydrae ... ... ... | 7·1 | ... | 02·46 | 4 | 8 5 27·22 | + 3·1374 | — 0·0048 | | 719 |
| 720 | 16 Cancri ... ... *ζ* | 6·0 | 1 | 97·19 | 4 | 8 6 28·56 | + 3·4415 | — 0·0104 | + 0·0033 | 720 |

680. Orange. 716. Reddish. 720. Very close double. Observed as one mass. A third star, magnitude 6·8, follows closely and is south.

| No. | Mean Year and Fraction of Year. | Number of Observations. | Mean N.P.D. | Precess. | Sec. Var. | Proper Motion. | Auwers' Bradley, 1755. | Lalande, 1800. | Weisse's Bessel (1), 1825. | Albany (A. G.), 1875. | Radcliffe, 1890. | Greenwich, 1890. | B.D. | No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ° ′ ″ | ″ | ″ | ″ | | | | | | | ° | |
| 676 | 99·22 | 3 | 89 34 25·7 | + 8·312 | +0·405 | | | 15019 | 1095 | | | | + 0 2054 | 676 |
| 677 | 97·53 | 3 | 63 58 38·8 | + 8·317 | +0·483 | +0·026 | 1109 | 14991 | | | | 2295 | +26 1633 | 677 |
| 678 | 98·19 | 3 | 65 21 43·0 | + 8·348 | +0·478 | +0·055 | 1111 | 15000 | | | | 2296 | +24 1759 | 678 |
| 679 | 00·19 | 3 | 87 21 20·4 | + 8·389 | +0·411 | | | | 1122 | 2990 | | | + 2 1761 | 679 |
| 680 | 98·16 | 5 | 61 43 55·8 | + 8·411 | +0·490 | +0·051 | 1112 | 15028 | | | 1960 | 2300 | +28 1463 | 680 |
| 681 | 98·22 | 3 | 69 26 36·6 | + 8·418 | +0·463 | −0·020 | 1113 | 15050 | | | | 2301 | +20 1893 | 681 |
| 682 | 98·20 | 3 | 71 14 45·6 | + 8·501 | +0·457 | +0·044 | 1115 | 15078 | | | | 2304 | +18 1733 | 682 |
| 683 | 99·22 | 3 | 87 53 52·5 | + 8·588 | +0·407 | | | 15135 | 1187 | 3015 | | | + 2 1776 | 683 |
| 684 | 97·86 | 3 | 66 36 40·7 | + 8·679 | +0·469 | −0·015 | 1119 | 15146 | | | | 2313 | +23 1812 | 684 |
| 685 | 98·49 | 3 | 85 25 1·6 | + 8·767 | +0·412 | | | 15207 | 1241 | 3035 | | | + 4 1826 | 685 |
| 686 | 01·20 | 4 | 114 36 30·7 | + 8·876 | +0·326 | −0·024 | 1132 | 15300 | | | 1991 | 2324 | | 686 |
| 687 | 99·19 | 3 | 86 28 7·5 | + 8·911 | +0·407 | | | | 1289 | 3052 | | | + 3 1818 | 687 |
| 688 | 99·22 | 3 | 85 17 18·4 | + 8·914 | +0·410 | | | 15271 | | 3053 | | | + 4 1833 | 688 |
| 689 | 00·19 | 3 | 89 40 1·2 | + 8·928 | +0·398 | | | 15286 | | | | | + 0 2108 | 689 |
| 690 | 00·18 | 3 | 87 58 40·8 | + 8·988 | +0·402 | −0·009 | 1131 | 15321 | 1319 | 3062 | | | + 2 1808 | 690 |
| 691 | 99·19 | 3 | 86 27 52·5 | + 9·016 | +0·406 | | | | 1324 | 3065 | | | + 3 1824 | 691 |
| 692 | 96·17 | 3 | 62 58 30·8 | + 9·055 | +0·475 | +0·028 | 1128 | 15316 | | | | 2336 | +27 1499 | 692 |
| 693 | 97·21 | 3 | 69 51 6·4 | + 9·246 | +0·450 | +0·035 | 1137 | 15417 | | | | 2345 | +20 1946 | 693 |
| 694 | 98·50 | 3 | 85 14 56·7 | + 9·346 | +0·405 | | | 15475 | | 3098 | | | + 4 1860 | 694 |
| 695 | 98·17 | 3 | 73 56 32·0 | + 9·361 | +0·436 | +0·026 | 1138 | 15468 | | | | 2350 | +16 1590 | 695 |
| 696 | 99·19 | 3 | 88 36 20·9 | + 9·424 | +0·395 | 0·000 | | 15522 | 1473 | 3108 | | | + 1 1959 | 696 |
| 697 | 98·22 | 3 | 73 12 42·4 | + 9·477 | +0·437 | −0·021 | | 15525 | | | | | +16 1598 | 697 |
| 698 | 99·21 | 3 | 87 30 30·5 | + 9·504 | +0·397 | −0·085 | 1139 | 15556 | 1503 | 3112 | | 2354 | + 2 1833 | 698 |
| 699 | 02·20 | 3 | 86 47 39·0 | + 9·513 | +0·399 | | | 15562 | 1506 | 3115 | | | + 3 1860 | 699 |
| 700 | 97·88 | 3 | 64 19 59·0 | + 9·636 | +0·461 | −0·013 | 1140 | 15581 | | | | 2360 | +25 1812 | 700 |
| 701 | 98·51 | 3 | 66 8 30·9 | + 9·648 | +0·455 | +0·010 | | 15590 | | | | 2363 | +23 1866 | 701 |
| 702 | 98·50 | 3 | 72 25 0·9 | + 9·649 | +0·436 | −0·010 | 1143 | 15602 | | | | 2364 | +17 1731 | 702 |
| 703 | 98·51 | 3 | 73 16 7·3 | + 9·707 | +0·433 | −0·003 | 1146 | 15630 | | | 2039 | 2367 | +16 1612 | 703 |
| 704 | 02·20 | 3 | 84 50 41·9 | + 9·717 | +0·401 | | | 15657 | 1581 | | | | + 5 1857 | 704 |
| 705 | 99·19 | 3 | 86 45 42·9 | + 9·790 | +0·395 | | | | | 3142 | | | + 3 1875 | 705 |
| 706 | 99·22 | 3 | 87 23 26·3 | + 9·803 | +0·394 | −0·123 | 1153 | 15695 | 1609 | 3143 | | 2370 | + 2 1854 | 706 |
| 707 | 96·84 | 3 | 61 55 30·4 | + 9·827 | +0·465 | +0·039 | 1149 | 15676 | | | 2047 | 2371 | +28 1532 | 707 |
| 708 | 98·54 | 3 | 67 38 55·6 | + 9·869 | +0·447 | −0·009 | 1152 | 15702 | | | | 2374 | +22 1845 | 708 |
| 709 | 01·94 | 19 | 1 4 0·4 | + 9·877 | +8·316 | −0·020 | | | | | 2006 | 2337 | +89 13 | 709 |
| 710 | 98·22 | 3 | 67 4 42·9 | +10·055 | +0·445 | −0·005 | 1157 | 15786 | | | | 2381 | +23 1887 | 710 |
| 711 | 99·19 | 3 | 87 32 58·9 | +10·071 | +0·389 | | | 15820 | 1717 | 3180 | | | + 2 1868 | 711 |
| 712 | 02·20 | 3 | 90 17 16·6 | +10·081 | +0·382 | | | 15832 | 1720 | | 2062 | | − 0 1903 | 712 |
| 713 | 02·22 | 3 | 88 32 10·4 | +10·107 | +0·386 | | | | 1726 | 3185 | | | + 1 1995 | 713 |
| 714 | 97·90 | 3 | 68 7 39·7 | +10·168 | +0·440 | +0·059 | 1161 | 15847 | | | | 2384 | +22 1862 | 714 |
| 715 | 98·18 | 3 | 76 4 3·9 | +10·261 | +0·416 | +0·019 | 1165 | 15893 | 1776 | | | 2388 | +14 1831 | 715 |
| 716 | 02·84 | 3 | 114 0 57·5 | +10·274 | +0·316 | −0·061 | 1170 | 15946 | | | 2074 | 2389 | | 716 |
| 717 | 98·22 | 3 | 64 11 19·9 | +10·360 | +0·448 | +0·351 | 1167 | 15925 | | | 2080 | 2393 | +25 1865 | 717 |
| 718 | 98·21 | 3 | 75 4 28·0 | +10·430 | +0·416 | −0·007 | | 15968 | | | | 2396 | +15 1775 | 718 |
| 719 | 02·22 | 3 | 86 45 15·3 | +10·437 | +0·386 | | | 15984 | 46 | 3223 | | | + 3 1913 | 719 |
| 720 | 97·19 | 3 | 72 3 2·8 | +10·513 | +0·423 | +0·104 | 1175 | 16004 | | | | 2402 | +18 1867 | 720 |

696. Authority for Proper Motions: Boss.
701. Authority for Proper Motions: Becker.
697, 718. Authority for Proper Motions: Auwers (Berlin A).
709. Authority for Proper Motions: Thackeray.

| No. | Constellation. | Magnitude. | Number of Estimations. | Mean Year and Fraction of Year. | Number of Observations. | Mean R.A. | Precess. | Sec. Var. | Proper Motion. | No. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | h. m. s. | s. | s. | s. | |
| 721 | Hydrae ... ... ... | 7·7 | 2 | 99·15 | 3 | 8 6 33·56 | +3·1637 | −0·0053 | | 721 |
| 722 | Cancri ... ... ... | 6·3 | 1 | 98·21 | 3 | 8 7 46·22 | +3·5645 | −0·0132 | | 722 |
| 723 | Hydrae ... ... ... | 7·8* | ... | 02·20 | 3 | 8 9 29·11 | +3·1015 | −0·0044 | | 723 |
| 724 | 17 Cancri ... ... $\beta$ | 3·8 | ... | 97·99 | 22 | 8 11 5·52 | +3·2607 | −0·0071 | −0·0044 | 724 |
| 725 | Hydrae ... ... ... | 7·1 | 3 | 99·16 | 3 | 8 12 2·65 | +3·1615 | −0·0054 | | 725 |
| 726 | Hydrae ... ... ... | 7·6 | ... | 02·22 | 3 | 8 12 25·65 | +3·1012 | −0·0045 | | 726 |
| 727 | Cancri ... ... ... | 6·7 | 1 | 96·56 | 3 | 8 12 35·74 | +3·3934 | −0·0099 | | 727 |
| 728 | Cancri ... ... ... | 6·0 | ... | 98·16 | 3 | 8 14 31·04 | +3·5014 | −0·0124 | +0·0041 | 728 |
| 729 | Hydrae ... ... ... | 6·1 | ... | 99·96 | 4 | 8 14 34·47 | +3·1556 | −0·0054 | | 729 |
| 730 | 19 Cancri ... ... $\lambda$ | 6·0 | 1 | 97·49 | 3 | 8 14 35·39 | +3·5760 | −0·0143 | −0·0024 | 730 |
| 731 | Hydrae ... ... ... | 7·8* | ... | 99·20 | 3 | 8 16 6·18 | +3·0995 | −0·0046 | +0·0020 | 731 |
| 732 | Hydrae ... ... ... | 6·9 | 1 | 00·20 | 4 | 8 16 59·66 | +3·1204 | −0·0049 | | 732 |
| 733 | 20 Cancri ... ... $d^1$ | 5·7 | ... | 00·25 | 16 | 8 17 38·29 | +3·4450 | −0·0114 | −0·0053 | 733 |
| 734 | Hydrae ... ... ... | 7·6 | 2 | 99·17 | 3 | 8 18 37·97 | +3·0800 | −0·0043 | | 734 |
| 735 | 25 Cancri ... ... $d^2$ | 6·2 | ... | 97·17 | 3 | 8 20 10·25 | +3·4152 | −0·0109 | −0·0144 | 735 |
| 736 | Hydrae ... ... ... | 5·9 | ... | 99·69 | 4 | 8 20 24·04 | +3·1191 | −0·0050 | | 736 |
| 737 | Hydrae ... ... ... | 6·7 | ... | 99·20 | 3 | 8 20 37·77 | +3·1090 | −0·0048 | | 737 |
| 738 | 24 Cancri ... ... $\upsilon^1$ | 7·1 | 2 | 98·19 | 3 | 8 20 42·92 | +3·5791 | −0·0150 | −0·0053 | 738 |
| 739 | 27 Cancri ... ... ... | 5·7 | 1 | 97·53 | 3 | 8 21 12·12 | +3·3243 | −0·0090 | −0·0026 | 739 |
| 740 | 28 Cancri ... ... $\upsilon^2$ | 6·1 | ... | 97·89 | 3 | 8 22 41·05 | +3·5671 | −0·0150 | −0·0042 | 740 |
| 741 | Hydrae ... ... ... | 7·3 | 1 | 00·21 | 4 | 8 22 42·05 | +3·1400 | −0·0054 | | 741 |
| 742 | 29 Cancri ... ... ... | 5·9 | ... | 98·21 | 3 | 8 23 2·50 | +3·3541 | −0·0098 | −0·0028 | 742 |
| 743 | Hydrae ... ... ... | 7·4 | 1 | 00·21 | 3 | 8 23 6·46 | +3·0836 | −0·0045 | | 743 |
| 744 | Hydrae ... ... ... | 7·6 | 1 | 00·21 | 4 | 8 23 26·12 | +3·1026 | −0·0048 | | 744 |
| 745 | Hydrae ... ... ... | 7·4 | 2 | 00·20 | 4 | 8 24 39·60 | +3·0842 | −0·0045 | | 745 |
| 746 | Hydrae ... ... ... | 7·2 | ... | 99·19 | 3 | 8 24 47·54 | +3·0794 | −0·0044 | | 746 |
| 747 | 30 Cancri ... ... $\upsilon^3$ | 5·7 | ... | 96·15 | 3 | 8 25 35·70 | +3·5612 | −0·0151 | −0·0072 | 747 |
| 748 | 31 Cancri ... ... $\theta$ | 5·5 | ... | 97·89 | 3 | 8 25 53·63 | +3·4310 | −0·0118 | −0·0051 | 748 |
| 749 | 33 Cancri ... ... $\eta$ | 5·6 | ... | 00·67 | 15 | 8 26 55·55 | +3·4793 | −0·0131 | −0·0039 | 749 |
| 750 | 32 Cancri ... ... ... | 6·4 | ... | 97·85 | 3 | 8 27 5·45 | +3·5590 | −0·0152 | −0·0074 | 750 |
| 751 | Hydrae ... ... ... | 6·1 | ... | 02·21 | 3 | 8 28 27·11 | +3·1678 | −0·0061 | | 751 |
| 752 | Hydrae ... ... ... | 7·2 | 1 | 00·18 | 4 | 8 30 0·76 | +3·0858 | −0·0046 | | 752 |
| 753 | Hydrae ... ... ... | 6·5 | ... | 00·19 | 4 | 8 30 12·25 | +3·1299 | −0·0054 | | 753 |
| 754 | Cancri ... ... ... | 6·3 | ... | 96·54 | 3 | 8 30 31·24 | +3·3695 | −0·0106 | −0·0003 | 754 |
| 755 | Cancri ... ... ... | 6·8 | ... | 96·81 | 3 | 8 32 52·46 | +3·5412 | −0·0154 | −0·0030 | 755 |
| 756 | Hydrae ... ... ... | 7·3 | ... | 01·71 | 4 | 8 33 11·77 | +3·0918 | −0·0048 | | 756 |
| 757 | 5 Hydrae ... ... $\sigma$ | 4·7 | ... | 99·47 | 4 | 8 33 31·80 | +3·1403 | −0·0057 | −0·0038 | 757 |
| 758 | Cancri ... ... ... | 6·3 | 1 | 97·54 | 3 | 8 34 6·51 | +3·4512 | −0·0130 | −0·0040 | 758 |
| 759 | Cancri ... ... ... | 7·6 | 2 | 97·85 | 3 | 8 34 13·62 | +3·4510 | −0·0130 | | 759 |
| 760 | 41 Cancri ... ... $\epsilon$ | 6·3 | ... | 98·23 | 3 | 8 34 42·91 | +3·4505 | −0·0130 | −0·0060 | 760 |
| 761 | Hydrae ... ... ... | 7·1 | 2 | 00·78 | 5 | 8 35 6·79 | +3·1141 | −0·0052 | | 761 |
| 762 | 43 Cancri ... ... $\gamma$ | 4·7 | ... | 01·69 | 8 | 8 37 29·96 | +3·4866 | −0·0143 | −0·0087 | 762 |
| 763 | 45 Cancri ... ... $A^1$ | 5·5 | ... | 98·24 | 3 | 8 37 41·72 | +3·3119 | −0·0097 | −0·0012 | 763 |
| 764 | 7 Hydrae ... ... $\eta$ | 4·4 | ... | 00·19 | 4 | 8 37 59·85 | +3·1405 | −0·0058 | −0·0029 | 764 |
| 765 | Cancri ... ... S | Var. | 2 | 98·55 | 3 | 8 38 13·38 | +3·4356 | −0·0129 | | 765 |

724. Reddish-orange. 732. Orange-red. 738. Double. Brighter observed. Companion, of magnitude 8, follows north. 759. Slightly brighter than star near, B.D. + 20° 2152, which is north. 760. Brighter than No. 758. 765. 1898 April 4, mag. 8; 1899 Mar. 22, mag. 8·3. Chandler's limits are 8·2 and 9·8. This star is of the *Algol*-type.

| No. | Mean Year and Fraction of Year. | Number of Observations. | Mean N.P.D. | Precess. | Sec. Var. | Proper Motion. | Auwers' Bradley, 1755. | Lalande, 1800. | Weisse's Bessel (1), 1825. | Albany (A. G.), 1875. | Radcliffe, 1890. | Greenwich, 1890. | B.D. | No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ° ′ ″ | ″ | ″ | ″ | | | | | | | ° | |
| 721 | 99·15 | 3 | 85 25 45·2 | +10·519 | +0·388 | | | 16023 | 78 | 3231 | | | +4 1932 | 721 |
| 722 | 98·21 | 3 | 66 33 39·6 | +10·609 | +0·437 | | | 16053 | | | | 2407 | +23 1913 | 722 |
| 723 | 02·20 | 3 | 88 32 20·9 | +10·736 | +0·378 | | | 16126 | 163 | 3258 | | | +1 2040 | 723 |
| 724 | 96·20 | 4 | 80 30 22·1 | +10·854 | +0·395 | +0·041 | 1180 | 16174 | 201 | | 2105 | 2417 | +9 1917 | 724 |
| 725 | 99·16 | 3 | 85 28 20·1 | +10·925 | +0·382 | | | 16213 | 228 | 3288 | | | +4 1945 | 725 |
| 726 | 02·22 | 3 | 88 32 38·8 | +10·953 | +0·374 | | | 16239 | 241 | 3292 | | | +1 2056 | 726 |
| 727 | 96·56 | 3 | 74 0 42·0 | +10·965 | +0·410 | | | 16224 | | | | 2422 | +16 1679 | 727 |
| 728 | 98·16 | 3 | 68 56 12·0 | +11·105 | +0·420 | +0·053 | | 16292 | | | | 2428 | +21 1817 | 728 |
| 729 | 98·89 | 3 | 85 44 14·6 | +11·109 | +0·378 | | | 16312 | | 3311 | | | +4 1954 | 729 |
| 730 | 97·49 | 3 | 65 39 45·2 | +11·111 | +0·429 | +0·028 | 1182 | 16288 | | | | 2429 | +24 1909 | 730 |
| 731 | 99·20 | 3 | 88 36 54·1 | +11·221 | +0·370 | +0·128 | | 16369 | 350 | 3327 | | | +1 2074 | 731 |
| 732 | 99·21 | 3 | 87 31 46·6 | +11·285 | +0·371 | | | 16397 | | 3335 | | | +2 1948 | 732 |
| 733 | 01·20 | 3 | 71 20 47·4 | +11·332 | +0·410 | +0·022 | 1185 | 16406 | | | 2145 | 2434 | +18 1930 | 733 |
| 734 | 99·17 | 3 | 89 37 5·4 | +11·403 | +0·365 | | | 16463 | | | | | +0 2288 | 734 |
| 735 | 97·17 | 3 | 72 37 26·7 | +11·514 | +0·403 | +0·143 | 1192 | 16506 | | | | | +17 1842 | 735 |
| 736 | 98·53 | 3 | 87 34 20·0 | +11·530 | +0·367 | | | 16534 | 466 | 3362 | | | +2 1965 | 736 |
| 737 | 99·20 | 3 | 88 5 54·3 | +11·547 | +0·366 | | | 16546 | 475 | 3366 | | | +2 1967 | 737 |
| 738 | 98·19 | 3 | 65 8 12·5 | +11·553 | +0·422 | +0·080 | 1193 | 16517 | | | | | +25 1920 | 738 |
| 739 | 97·53 | 3 | 77 0 54·8 | +11·587 | +0·391 | +0·093 | 1196 | 16558 | 483 | | | 2448 | +13 1912 | 739 |
| 740 | 97·89 | 3 | 65 31 23·0 | +11·693 | +0·418 | +0·057 | 1198 | 16597 | | | | 2452 | +24 1931 | 740 |
| 741 | 99·22 | 3 | 86 27 4·7 | +11·694 | +0·367 | | | 16623 | 526 | 3381 | | | +3 1983 | 741 |
| 742 | 98·21 | 3 | 75 27 28·0 | +11·719 | +0·392 | +0·005 | 1200 | 16621 | 529 | | 2172 | 2454 | +14 1899 | 742 |
| 743 | 00·21 | 3 | 89 25 28·3 | +11·723 | +0·360 | | | 16645 | | | | | +0 2305 | 743 |
| 744 | 00·20 | 3 | 88 25 15·5 | +11·747 | +0·362 | | | | 547 | 3387 | | | +1 2102 | 744 |
| 745 | 99·20 | 3 | 89 23 33·4 | +11·833 | +0·358 | | | 16680 | 577 | | | | +0 2312 | 745 |
| 746 | 99·19 | 3 | 89 38 47·3 | +11·842 | +0·357 | | | 16686 | 580 | | | | +0 2313 | 746 |
| 747 | 96·15 | 3 | 65 34 53·2 | +11·899 | +0·413 | +0·059 | 1201 | 16685 | | | | 2464 | +24 1940 | 747 |
| 748 | 97·89 | 3 | 71 34 2·6 | +11·920 | +0·397 | +0·050 | 1203 | 16716 | | | | 2467 | +18 1963 | 748 |
| 749 | 00·69 | 4 | 69 13 8·4 | +11·993 | +0·401 | +0·047 | 1207 | 16760 | | | 2186 | 2473 | +20 2109 | 749 |
| 750 | 97·85 | 3 | 65 34 28·8 | +12·004 | +0·411 | +0·037 | 1205 | 16739 | | | | 2474 | +24 1946 | 750 |
| 751 | 02·21 | 3 | 84 54 5·9 | +12·099 | +0·363 | | | 16814 | 665 | | | | +5 1997 | 751 |
| 752 | 99·17 | 3 | 89 17 33·1 | +12·208 | +0·352 | | | 16881 | 711 | 3444 | | | +0 2335 | 752 |
| 753 | 99·19 | 3 | 86 54 44·4 | +12·221 | +0·357 | | | 16886 | 713 | 3447 | | | +3 2014 | 753 |
| 754 | 96·54 | 3 | 74 20 25·6 | +12·243 | +0·384 | +0·027 | | 16882 | | | | 2481 | +15 1851 | 754 |
| 755 | 96·81 | 3 | 65 57 35·4 | +12·406 | +0·400 | +0·170 | | 16964 | | | | 2496 | +24 1968 | 755 |
| 756 | 02·21 | 3 | 88 57 32·3 | +12·428 | +0·348 | | | 17007 | | 3469 | | | +1 2142 | 756 |
| 757 | 98·23 | 3 | 86 18 27·0 | +12·451 | +0·354 | +0·003 | 1221 | 17020 | 810 | 3471 | 2216 | | +3 2026 | 757 |
| 758 | 97·54 | 3 | 70 6 23·7 | +12·490 | +0·388 | −0·016 | | 17024 | | | | 2507 | +20 2150 | 758 |
| 759 | 97·85 | 3 | 70 6 20·3 | +12·498 | +0·388 | | | | | | | 2510 | +20 2153 | 759 |
| 760 | 98·23 | 3 | 70 6 4·5 | +12·532 | +0·387 | −0·001 | 1225 | 17045 | | | | 2516 | +20 2171 | 760 |
| 761 | 99·17 | 3 | 87 43 30·8 | +12·559 | +0·349 | | | 17085 | 855 | 3479 | | | +2 2039 | 761 |
| 762 | 02·21 | 3 | 68 10 18·1 | +12·721 | +0·388 | +0·033 | 1230 | 17143 | | | 2232 | 2523 | +21 1895 | 762 |
| 763 | 98·24 | 3 | 76 57 36·7 | +12·734 | +0·368 | −0·010 | 1232 | 17166 | 918 | | | 2524 | +13 1972 | 763 |
| 764 | 99·19 | 3 | 86 14 32·2 | +12·755 | +0·348 | −0·005 | 1235 | 17180 | 929 | 3499 | 2235 | 2525 | +3 2039 | 764 |
| 765 | 98·55 | 3 | 70 36 20·9 | +12·770 | +0·381 | | | | | | | | +19 2090 | 765 |

728. Authority for Proper Motions: Becker. 731, 755. Authority for Proper Motions: Porter.
754, 758. Authority for Proper Motions: Auwers (Mayer's Sternverzeichnis).

| No. | Constellation. | Magnitude. | Number of Estimations. | Mean Year and Fraction of Year. | Number of Observations. | Mean R.A. | Precess. | Sec. Var. | Proper Motion. | No. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | h. m. s. | s. | s. | s. | |
| 766 | Hydrae ... ... ... | 6·3 | ... | 98·54 | 3 | 8 38 44·43 | +3·1572 | −0·0062 | | 766 |
| 767 | 47 Cancri ... ... δ | 4·1 | ... | 96·94 | 3 | 8 39 0·15 | +3·4171 | −0·0125 | −0·0026 | 767 |
| 768 | Hydrae ... ... ... | 7·8* | ... | 00·16 | 3 | 8 39 4·06 | +3·0037 | −0·0032 | | 768 |
| 769 | Hydrae ... ... ... | 7·0 | 2 | 00·20 | 4 | 8 40 15·45 | +3·0827 | −0·0047 | | 769 |
| 770 | Hydrae ... ... ... | 6·5 | ... | 02·21 | 3 | 8 40 18·62 | +3·1628 | −0·0063 | | 770 |
| 771 | Hydrae ... ... ... | 7·5 | 2 | 00·18 | 4 | 8 41 11·31 | +3·0907 | −0·0049 | | 771 |
| 772 | 50 Cancri ... ... $A^2$ | 6·0 | 1 | 97·21 | 3 | 8 41 27·15 | +3·2981 | −0·0095 | −0·0063 | 772 |
| 773 | 11 Hydrae ... ... ε | 3·5 | 1 | 98·81 | 11 | 8 41 28·81 | +3·1939 | −0·0071 | −0·0135 | 773 |
| 774 | Hydrae ... ... ... | 7·1 | ... | 00·20 | 4 | 8 43 20·67 | +3·1246 | −0·0056 | | 774 |
| 775 | Hydrae ... ... ... | 7·4 | 1 | 99·71 | 4 | 8 44 26·75 | +3·1053 | −0·0052 | | 775 |
| 776 | Cancri ... ... ... | 6·1 | ... | 97·54 | 3 | 8 45 3·55 | +3·4227 | −0·0131 | −0·0038 | 776 |
| 777 | Cancri ... ... ... | 6·5 | ... | 96·21 | 3 | 8 49 44·90 | +3·3859 | −0·0124 | −0·0012 | 777 |
| 778 | 60 Cancri ... ... ... | 5·7 | 1 | 97·53 | 3 | 8 50 27·98 | +3·2820 | −0·0096 | −0·0019 | 778 |
| 779 | Hydrae ... ... ... | 6·6 | 3 | 00·20 | 5 | 8 51 22·18 | +3·1519 | −0·0063 | | 779 |
| 780 | Hydrae ... ... ... | 8·0* | ... | 02·21 | 3 | 8 51 37·21 | +3·0860 | −0·0049 | | 780 |
| 781 | 62 Cancri ... ... $o^1$ | 5·1 | ... | 98·19 | 3 | 8 51 40·30 | +3·3480 | −0·0115 | +0·0029 | 781 |
| 782 | 63 Cancri ... ... $o^2$ | 5·7 | ... | 97·53 | 3 | 8 52 0·15 | +3·3524 | −0·0116 | +0·0031 | 782 |
| 783 | Hydrae ... ... ... | 6·8 | ... | 02·23 | 3 | 8 52 2·00 | +3·1223 | −0·0057 | | 783 |
| 784 | Hydrae ... ... ... | 7·1 | 2 | 99·19 | 3 | 8 52 58·19 | +3·1055 | −0·0053 | | 784 |
| 785 | 65 Cancri ... ... α | 4·3 | ... | 98·83 | 16 | 8 53 1·09 | +3·2840 | −0·0097 | +0·0010 | 785 |
| 786 | Hydrae ... ... ... | 7·0 | ... | 02·20 | 3 | 8 56 46·68 | +3·1240 | −0·0058 | | 786 |
| 787 | Hydrae ... ... ... | 5·9 | ... | 02·46 | 4 | 8 56 51·43 | +3·0712 | −0·0046 | −0·0040 | 787 |
| 788 | Hydrae ... ... ... | 6·9 | 2 | 00·23 | 5 | 8 57 25·13 | +3·2018 | −0·0077 | | 788 |
| 789 | Hydrae ... ... ... | 7·6 | 3 | 99·70 | 4 | 8 59 26·47 | +3·1380 | −0·0061 | | 789 |
| 790 | Hydrae ... ... ... | 7·5 | 1 | 02·20 | 3 | 9 0 3·99 | +3·1192 | −0·0057 | | 790 |
| 791 | Cancri ... ... ... | 6·3 | 1 | 97·57 | 3 | 9 1 41·06 | +3·4784 | −0·0164 | −0·0150 | 791 |
| 792 | Hydrae ... ... ... | 6·7 | 2 | 00·22 | 5 | 9 1 49·92 | +3·1032 | −0·0053 | | 792 |
| 793 | Hydrae ... ... ... | 6·6 | ... | 98·90 | 3 | 9 2 4·71 | +3·1215 | −0·0058 | | 793 |
| 794 | 76 Cancri ... ... κ | 5·4 | 2 | 97·96 | 12 | 9 2 19·85 | +3·2558 | −0·0094 | −0·0028 | 794 |
| 795 | 77 Cancri ... ... ξ | 5·2 | ... | 97·86 | 3 | 9 3 36·69 | +3·4571 | −0·0159 | −0·0011 | 795 |
| 796 | Hydrae ... ... ... | 7·7 | 4 | 99·22 | 3 | 9 4 18·78 | +3·1270 | −0·0059 | | 796 |
| 797 | Hydrae ... ... ... | 5·9 | ... | 95·16 | 3 | 9 4 23·69 | +2·8765 | −0·0005 | | 797 |
| 798 | 79 Cancri ... ... ... | 6·1 | ... | 98·21 | 4 | 9 4 36·23 | +3·4545 | −0·0159 | −0·0004 | 798 |
| 799 | Hydrae ... ... ... | 7·3 | 1 | 99·83 | 5 | 9 6 20·99 | +3·0839 | −0·0049 | | 799 |
| 800 | Hydrae ... ... ... | 7·0 | 3 | 00·20 | 4 | 9 6 59·37 | +3·1412 | −0·0063 | | 800 |
| 801 | Cancri ... ... ... | 6·1 | ... | 98·19 | 3 | 9 7 54·62 | +3·4356 | −0·0155 | −0·0019 | 801 |
| 802 | Hydrae ... ... ... | 7·4 | 3 | 99·20 | 3 | 9 8 11·25 | +3·1402 | −0·0063 | | 802 |
| 803 | 22 Hydrae ... ... θ | 3·9 | ... | 00·88 | 6 | 9 9 9·65 | +3·1161 | −0·0057 | +0·0078 | 803 |
| 804 | Hydrae ... ... ... | 8·0* | ... | 02·20 | 3 | 9 9 39·75 | +3·1496 | −0·0066 | | 804 |
| 805 | 82 Cancri ... ... $\pi^2$ | 5·6 | ... | 97·57 | 3 | 9 9 42·58 | +3·3211 | −0·0117 | −0·0029 | 805 |
| 806 | Hydrae ... ... ... | 7·1 | 2 | 99·21 | 3 | 9 11 31·76 | +3·0907 | −0·0050 | | 806 |
| 807 | Hydrae ... ... ... | 7·3 | 1 | 01·72 | 4 | 9 12 1·87 | +3·1094 | −0·0055 | | 807 |
| 808 | Hydrae ... ... ... | 7·4 | 3 | 00·98 | 4 | 9 12 24·28 | +3·0879 | −0·0050 | | 808 |
| 809 | 83 Cancri ... ... ... | 6·6 | ... | 98·49 | 18 | 9 13 24·03 | +3·3636 | −0·0134 | −0·0090 | 809 |
| 810 | Hydrae ... ... ... | 7·1 | 3 | 00·43 | 5 | 9 15 28·65 | +3·0820 | −0·0048 | | 810 |

767. Reddish. 777. Red. 791. Double. Brighter observed. Companion, of magnitude 6·7, precedes south.
792. Orange-yellow. 804. The Declination of this star in W.B. (1) is 10′ too great.

| No. | Mean Year and Fraction of Year. | Number of Observations. | Mean N.P.D. | Precess. | Sec. Var. | Proper Motion. | Auwers' Bradley, 1755. | Lalande, 1800. | Weisse's Bessel(1), 1825. | Albany (A.G.), 1875. | Radcliffe, 1890. | Greenwich, 1890. | B.D. | No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ° ′ ″ | ″ | ″ | ″ | | | | | | | ° | |
| 766 | 98·54 | 3 | 85 18 17·0 | +12·805 | +0·349 | | | 17206 | 947 | 3504 | | | +4 2029 | 766 |
| 767 | 96·94 | 3 | 71 28 41·0 | +12·822 | +0·378 | +0·226 | 1236 | 17199 | | | | 2526 | +18 2027 | 767 |
| 768 | 00·16 | 3 | 93 50 28·7 | +12·827 | +0·331 | | | | 961 | | 2238 | | −3 2454 | 768 |
| 769 | 99·20 | 3 | 89 26 19·5 | +12·907 | +0·339 | | | 17258 | 982 | | | | +0 2379 | 769 |
| 770 | 02·21 | 3 | 84 58 12·1 | +12·910 | +0·347 | | | 17255 | 981 | | | | +5 2049 | 770 |
| 771 | 99·18 | 3 | 88 59 15·6 | +12·969 | +0·338 | | | 17286 | 1005 | 3522 | | | +1 2163 | 771 |
| 772 | 97·21 | 3 | 77 31 22·6 | +12·986 | +0·361 | +0·034 | 1242 | 17279 | | | 2250 | | +12 1904 | 772 |
| 773 | 98·20 | 3 | 83 12 51·6 | +12·988 | +0·349 | +0·023 | 1243 | 17290 | 1008 | | 2251 | 2537 | +6 2036 | 773 |
| 774 | 99·21 | 3 | 87 3 59·6 | +13·112 | +0·339 | | | 17357 | 1061 | 3541 | | | +3 2057 | 774 |
| 775 | 98·55 | 3 | 88 8 48·0 | +13·185 | +0·336 | | | 17393 | 1086 | 3550 | | | +2 2072 | 775 |
| 776 | 97·54 | 3 | 70 47 41·0 | +13·225 | +0·370 | −0·011 | | 17400 | | | | 2559 | +19 2110 | 776 |
| 777 | 96·21 | 3 | 72 23 17·5 | +13·531 | +0·359 | −0·010 | | 17576 | | | | 2577 | +17 1973 | 777 |
| 778 | 97·53 | 3 | 77 59 29·9 | +13·577 | +0·346 | +0·005 | 1262 | 17609 | 1238 | | | | +12 1941 | 778 |
| 779 | 98·21 | 3 | 85 22 48·4 | +13·635 | +0·331 | | | 17642 | 1263 | 3603 | | | +4 2081 | 779 |
| 780 | 02·21 | 3 | 89 13 34·5 | +13·651 | +0·324 | | | | 1270 | 3605 | | | +0 2430 | 780 |
| 781 | 98·19 | 3 | 74 17 36·9 | +13·654 | +0·352 | −0·033 | 1265 | 17640 | | | | 2584 | +15 1945 | 781 |
| 782 | 97·53 | 3 | 74 2 4·4 | +13·676 | +0·352 | −0·036 | 1266 | 17651 | | | | 2586 | +16 1864 | 782 |
| 783 | 02·23 | 3 | 87 5 25·1 | +13·678 | +0·327 | | | 17663 | 1280 | 3608 | | | +3 2099 | 783 |
| 784 | 99·19 | 3 | 88 4 20·0 | +13·737 | +0·324 | | | 17701 | 1309 | 3617 | | | +2 2112 | 784 |
| 785 | 99·57 | 3 | 77 45 17·2 | +13·741 | +0·342 | +0·022 | 1269 | 17693 | 1300 | | 2303 | 2590 | +12 1948 | 785 |
| 786 | 02·20 | 3 | 86 56 9·3 | +13·978 | +0·321 | | | 17832 | 1401 | 3641 | | | +3 2124 | 786 |
| 787 | 02·22 | 3 | 90 5 30·1 | +13·983 | +0·315 | −0·090 | | 17835 | 1406 | | 2323 | 2608 | +0 2449 | 787 |
| 788 | 98·25 | 3 | 82 18 28·1 | +14·019 | +0·328 | | | 17845 | 1414 | | | | +7 2066 | 788 |
| 789 | 98·53 | 3 | 86 3 41·9 | +14·145 | +0·318 | | | 17909 | 1455 | 3655 | | | +4 2115 | 789 |
| 790 | 02·20 | 3 | 87 11 14·3 | +14·183 | +0·315 | | | | 1474 | 3662 | | | +2 2138 | 790 |
| 791 | 97·57 | 3 | 66 37 3·0 | +14·283 | +0·350 | −0·040 | | 17954 | | | | 2626 | +23 2048 | 791 |
| 792 | 00·21 | 5 | 88 8 7·7 | +14·292 | +0·311 | | | 17988 | 1508 | 3670 | | | +2 2145 | 792 |
| 793 | 98·90 | 3 | 87 1 1·5 | +14·307 | +0·313 | | | 17993 | 1511 | 3671 | | | +3 2144 | 793 |
| 794 | 98·22 | 4 | 78 55 45·1 | +14·323 | +0·326 | −0·009 | 1287 | 17995 | 1515 | | 2338 | 2627 | +11 1984 | 794 |
| 795 | 97·86 | 3 | 67 32 59·6 | +14·401 | +0·345 | −0·025 | 1289 | 18022 | | | | 2629 | +22 2061 | 795 |
| 796 | 00·80 | 5 | 86 39 8·1 | +14·443 | +0·310 | | | 18065 | 15 | 3680 | | | +3 2154 | 796 |
| 797 | 95·16 | 3 | 101 57 9·0 | +14·448 | +0·285 | | | 18083 | 28 | | 2348 | | −11 2565 | 797 |
| 798 | 98·21 | 4 | 67 35 49·9 | +14·461 | +0·343 | −0·018 | 1291 | 18055 | | | | 2634 | +22 2063 | 798 |
| 799 | 97·59 | 3 | 89 17 57·4 | +14·566 | +0·303 | | | 18134 | 65 | 3685 | | | +0 2477 | 799 |
| 800 | 99·20 | 3 | 85 43 22·8 | +14·605 | +0·308 | | | 18150 | 73 | 3692 | | | +4 2139 | 800 |
| 801 | 98·19 | 3 | 68 18 16·6 | +14·660 | +0·335 | +0·016 | 1299 | 18163 | | | 2369 | 2644 | +21 1991 | 801 |
| 802 | 99·20 | 3 | 85 45 48·1 | +14·677 | +0·306 | | | 18196 | 102 | 3702 | | | +4 2144 | 802 |
| 803 | 98·57 | 3 | 87 15 49·0 | +14·734 | +0·302 | +0·309 | 1303 | 18219 | 129 | 3711 | 2370 | 2647 | +2 2167 | 803 |
| 804 | 02·20 | 3 | 85 8 36·4 | +14·764 | +0·304 | | | 18233 | 134 | 3713 | | | +5 2143 | 804 |
| 805 | 97·57 | 3 | 74 38 36·9 | +14·767 | +0·321 | −0·020 | 1304 | 18228 | | | | 2648 | +15 2009 | 805 |
| 806 | 99·21 | 3 | 88 51 11·1 | +14·874 | +0·296 | | | 18302 | 175 | 3723 | | | +1 2267 | 806 |
| 807 | 02·22 | 3 | 87 39 7·8 | +14·904 | +0·297 | | | | 188 | 3726 | | | +2 2173 | 807 |
| 808 | 00·24 | 3 | 89 1 32·5 | +14·925 | +0·294 | | | 18328 | 199 | 3728 | | | +1 2271 | 808 |
| 809 | 98·89 | 3 | 71 52 13·6 | +14·983 | +0·320 | +0·139 | 1309 | 18342 | | | 2386 | 2656 | +18 2165 | 809 |
| 810 | 98·59 | 3 | 89 23 39·2 | +15·104 | +0·289 | | | 18418 | 268 | | | | +0 2499 | 810 |

776, 777. Authority for Proper Motions: Auwers (Mayer's Sternverzeichnis).

787. The Proper Motions have been specially computed for the present catalogue.

791. Authority for Proper Motions: Becker.

| No. | Constellation. | Magnitude. | Number of Estimations. | Mean Year and Fraction of Year. | Number of Observations. | Mean R.A. | Precess. | Sec. Var. | Proper Motion. | No. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | h. m. s. | s. | s. | s. | |
| 811 | Hydrae ... ... ... | 7·6 | 2 | 97·59 | 3 | 9 15 57·37 | +3·1243 | −0·0059 | | 811 |
| 812 | Hydrae ... ... ... | 8·7 | 1 | 00·19 | 4 | 9 18 2·21 | +3·1324 | −0·0062 | | 812 |
| 813 | Hydrae ... ... ... | 7·6 | 1 | 00·79 | 5 | 9 18 3·30 | +3·1323 | −0·0062 | −0·0066 | 813 |
| 814 | Hydrae ... ... ... | 7·5 | 3 | 99·21 | 3 | 9 18 27·39 | +3·1157 | −0·0057 | | 814 |
| 815 | Hydrae ... ... ... | 8·0* | ... | 02·21 | 3 | 9 20 8·60 | +3·1436 | −0·0065 | | 815 |
| 816 | 30 Hydrae ... ... α | 2·3 | ... | 98·69 | 29 | 9 22 40·34 | +2·9502 | −0·0014 | −0·0019 | 816 |
| 817 | 2 Leonis ... ... ω | 5·5 | ... | 96·90 | 3 | 9 23 6·14 | +3·2141 | −0·0088 | +0·0024 | 817 |
| 818 | 3 Leonis ... ... ... | 5·9 | ... | 98·20 | 3 | 9 23 9·64 | +3·2009 | −0·0083 | −0·0043 | 818 |
| 819 | Hydrae ... ... ... | 7·6 | 4 | 99·71 | 4 | 9 25 54·78 | +3·1239 | −0·0059 | | 819 |
| 820 | Hydrae ... ... ... | 7·0 | ... | 02·21 | 3 | 9 26 21·60 | +3·1004 | −0·0052 | | 820 |
| 821 | 5 Leonis ... ... ξ | 5·0 | ... | 99·60 | 10 | 9 26 33·38 | +3·2452 | −0·0099 | −0·0076 | 821 |
| 822 | 6 Leonis ... ... h | 5·2 | ... | 97·19 | 3 | 9 26 35·94 | +3·2213 | −0·0091 | −0·0005 | 822 |
| 823 | Hydrae ... ... ... | 6·9 | 4 | 99·21 | 3 | 9 27 31·23 | +3·1060 | −0·0054 | | 823 |
| 824 | Leonis ... ... ... | 6·7 | ... | 96·94 | 3 | 9 29 34·13 | +3·2626 | −0·0107 | −0·0010 | 824 |
| 825 | Hydrae ... ... ... | 8·0 | 1 | 02·46 | 4 | 9 30 40·99 | +3·0819 | −0·0046 | | 825 |
| 826 | 8 Leonis ... ... ... | 5·9 | ... | 98·24 | 3 | 9 31 31·64 | +3·3176 | −0·0128 | −0·0025 | 826 |
| 827 | Hydrae ... ... ... | 6·5 | ... | 95·26 | 3 | 9 32 3·44 | +2·7103 | +0·0040 | | 827 |
| 828 | Hydrae ... ... ... | 7·3 | 4 | 99·22 | 4 | 9 32 31·29 | +3·1028 | −0·0053 | −0·0084 | 828 |
| 829 | 2 Sextantis ... ... ... | 5·5 | 1 | 01·73 | 4 | 9 33 14·25 | +3·1440 | −0·0066 | −0·0120 | 829 |
| 830 | Leonis ... ... ... | 6·7 | ... | 96·22 | 3 | 9 33 18·06 | +3·3752 | −0·0153 | | 830 |
| 831 | Sextantis ... ... ... | 7·3 | 2 | 99·20 | 3 | 9 34 27·64 | +3·1233 | −0·0059 | | 831 |
| 832 | 14 Leonis ... ... o | 3·7 | ... | 97·59 | 8 | 9 35 48·81 | +3·2164 | −0·0092 | −0·0104 | 832 |
| 833 | Leonis ... ... ... | 8·7 | 1 | 99·92 | 3 | 9 36 38·96 | +3·3921 | −0·0163 | −0·0180 | 833 |
| 834 | Hydrae ... ... ... | 7·2 | 1 | 02·47 | 4 | 9 37 16·18 | +3·0751 | −0·0043 | | 834 |
| 835 | Leonis ... ... ... | 7·6 | ... | 97·59 | 3 | 9 37 46·64 | +3·3657 | −0·0153 | | 835 |
| 836 | 16 Leonis ... ... ψ | 5·6 | ... | 98·27 | 3 | 9 38 17·15 | +3·2729 | −0·0114 | −0·0009 | 836 |
| 837 | Leonis ... ... ... | 6·6 | 1 | 97·91 | 3 | 9 38 56·44 | +3·3434 | −0·0144 | −0·0005 | 837 |
| 838 | 17 Leonis ... ... ϵ | 3·1 | ... | 97·75 | 9 | 9 40 10·56 | +3·4175 | −0·0179 | −0·0043 | 838 |
| 839 | Sextantis ... ... ... | 6·0 | ... | 96·25 | 3 | 9 40 53·55 | +3·1686 | −0·0075 | | 839 |
| 840 | 18 Leonis ... ... ... | 5·8 | ... | 98·21 | 3 | 9 41 0·10 | +3·2384 | −0·0102 | −0·0016 | 840 |
| 841 | Sextantis ... ... ... | 6·3 | 2 | 97·90 | 3 | 9 41 14·00 | +3·1026 | −0·0052 | | 841 |
| 842 | Leonis ... ... ... | 8·9 | 2 | 98·57 | 3 | 9 41 53·17 | +3·2323 | −0·0100 | | 842 |
| 843 | Leonis ... ... R | Var. | 2 | 98·90 | 3 | 9 42 10·77 | +3·2320 | −0·0100 | −0·0021 | 843 |
| 844 | Sextantis ... ... ... | 7·7 | 2 | 98·59 | 3 | 9 45 5·64 | +3·0801 | −0·0044 | | 844 |
| 845 | 4 Sextantis ... ... ... | 6·2 | ... | 98·24 | 3 | 9 45 17·83 | +3·1351 | −0·0063 | −0·0094 | 845 |
| 846 | 23 Leonis ... ... ... | 6·7 | ... | 96·25 | 3 | 9 45 37·30 | +3·2508 | −0·0108 | +0·0023 | 846 |
| 847 | 7 Sextantis ... ... ... | 5·8 | ... | 98·57 | 3 | 9 47 2·67 | +3·1101 | −0·0054 | −0·0140 | 847 |
| 848 | Sextantis ... ... ... | 7·1 | 1 | 99·25 | 3 | 9 47 4·43 | +3·0797 | −0·0043 | | 848 |
| 849 | 24 Leonis ... ... μ | 4·1 | ... | 97·59 | 16 | 9 47 4·62 | +3·4376 | −0·0196 | −0·0185 | 849 |
| 850 | Sextantis ... ... ... | 6·3 | ... | 96·24 | 3 | 9 48 27·85 | +3·1545 | −0·0070 | | 850 |
| 851 | Sextantis ... ... ... | 7·7 | ... | 01·24 | 4 | 9 49 25·68 | +3·0906 | −0·0047 | | 851 |
| 852 | Leonis ... ... ... | 6·0 | ... | 96·27 | 3 | 9 51 7·89 | +3·1908 | −0·0085 | −0·0077 | 852 |
| 853 | Sextantis ... ... ... | 7·3 | 2 | 99·26 | 4 | 9 51 37·01 | +3·1314 | −0·0061 | −0·0139 | 853 |
| 854 | Sextantis ... ... ... | 8·2* | ... | 02·23 | 3 | 9 52 17·23 | +3·0773 | −0·0041 | | 854 |
| 855 | Antliae ... ... ... | 6·2 | ... | 95·28 | 6 | 9 52 23·13 | +2·7127 | +0·0061 | | 855 |

816. Orange-red. 820. Double. Companion follows south. 829. Orange. 831. Slightly fainter than No. 828. 835. B.D. magnitude, 6·5; Berlin (B), 7·1. 843. 1898 April 4, mag. 8·7; 1899 March 15, very red, mag. 9·0. The limits are 5·2 and 10·0; the period is 313 days. 849. Yellow. 850. Reddish.

| No. | Mean Year and Fraction of Year. | Number of Observations. | Mean N.P.D. | Precess. | Sec. Var. | Proper Motion. | Auwers' Bradley, 1755. | Lalande, 1800. | Weisse's Bessel (1), 1825. | Albany (A. G.), 1875. | Radcliffe, 1890. | Greenwich, 1890. | B.D. | No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ° ′ ″ | ″ | ″ | ″ | | | | | | | ° | |
| 811 | 97·59 | 3 | 86 38 4·1 | +15·131 | +0·292 | | | 18430 | 273 | 3747 | | | +3 2193 | 811 |
| 812 | 99·20 | 3 | 86 4 3·9 | +15·250 | +0·290 | | | 18483 | 323 | 3757 | | | +4 2178 | 812 |
| 813 | 99·20 | 3 | 86 4 17·3 | +15·251 | +0·290 | −0·019 | | 18486 | 324 | 3758 | | | +4 2178 | 813 |
| 814 | 99·21 | 3 | 87 9 41·9 | +15·274 | +0·288 | | | 18505 | 334 | 3760 | | | +3 2196 | 814 |
| 815 | 02·21 | 3 | 85 17 0·1 | +15·369 | +0·288 | | | 18561 | 371 | 3771 | | | +4 2185 | 815 |
| 816 | 97·05 | 5 | 98 13 30·0 | +15·510 | +0·266 | −0·052 | 1330 | 18618 | 432 | | 2429 | 2683 | −8 2680 | 816 |
| 817 | 96·90 | 3 | 80 30 27·3 | +15·534 | +0·290 | −0·018 | 1328 | 18619 | 438 | | | | +9 2188 | 817 |
| 818 | 98·20 | 3 | 81 22 30·7 | +15·537 | +0·288 | −0·002 | 1329 | 18632 | 441 | | | 2684 | +8 2226 | 818 |
| 819 | 98·55 | 3 | 86 28 51·1 | +15·688 | +0·277 | | | 18707 | 501 | 3799 | | | +3 2221 | 819 |
| 820 | 02·21 | 3 | 88 5 37·4 | +15·713 | +0·274 | | | 18726 | 511 | 3803 | | | +2 2215 | 820 |
| 821 | 99·22 | 3 | 78 15 25·8 | +15·723 | +0·287 | +0·060 | 1338 | | 515 | | 2451 | 2699 | +11 2053 | 821 |
| 822 | 97·19 | 3 | 79 50 35·1 | +15·726 | +0·285 | −0·009 | 1339 | 18728 | 517 | | 2454 | | +10 2014 | 822 |
| 823 | 99·21 | 3 | 87 41 35·2 | +15·776 | +0·273 | | | 18764 | 549 | 3805 | | | +2 2217 | 823 |
| 824 | 96·94 | 3 | 76 53 58·8 | +15·885 | +0·284 | +0·020 | | 18823 | | | | 2707 | +13 2117 | 824 |
| 825 | 02·21 | 3 | 89 21 9·2 | +15·945 | +0·266 | | | 18866 | 626 | 3822 | | | +0 2533 | 825 |
| 826 | 98·24 | 3 | 73 6 49·5 | +15·990 | +0·285 | +0·002 | 1347 | 18877 | | | 2474 | 2710 | +17 2109 | 826 |
| 827 | 95·26 | 3 | 114 15 22·0 | +16·017 | +0·231 | | | | | | 2476 | 2712 | | 827 |
| 828 | 99·89 | 3 | 87 51 19·3 | +16·042 | +0·265 | −0·037 | | 18919 | 666 | 3831 | | | +2 2229 | 828 |
| 829 | 02·24 | 3 | 84 53 55·6 | +16·079 | +0·267 | +0·033 | 1352 | 18940 | 683 | | | | +5 2207 | 829 |
| 830 | 96·22 | 3 | 69 15 4·9 | +16·083 | +0·287 | | | 18925 | | | | 2715 | +20 2351 | 830 |
| 831 | 99·20 | 3 | 86 21 8·9 | +16·143 | +0·263 | | | 18974 | 708 | 3837 | | | +3 2249 | 831 |
| 832 | 96·93 | 3 | 79 39 9·6 | +16·213 | +0·269 | +0·018 | 1360 | 19007 | 732 | | 2491 | 2728 | +10 2044 | 832 |
| 833 | 97·95 | 3 | 67 48 19·0 | +16·256 | +0·283 | +0·360 | | | | | | | +22 2118 | 833 |
| 834 | 02·22 | 3 | 89 49 25·7 | +16·287 | +0·255 | | | 19065 | 764 | | | | +0 2546 | 834 |
| 835 | 97·59 | 3 | 69 20 58·3 | +16·314 | +0·278 | | | 19067 | | | | | +20 2366 | 835 |
| 836 | 98·27 | 3 | 75 31 13·6 | +16·339 | +0·270 | +0·002 | 1366 | 19081 | 783 | | 2500 | 2737 | +14 2136 | 836 |
| 837 | 97·91 | 3 | 70 40 34·4 | +16·372 | +0·274 | +0·067 | | 19096 | | | | 2738 | +19 2251 | 837 |
| 838 | 97·42 | 3 | 65 45 54·1 | +16·435 | +0·278 | +0·008 | 1368 | 19123 | | | 2505 | 2741 | +24 2129 | 838 |
| 839 | 96·25 | 3 | 82 49 47·6 | +16·471 | +0·257 | | | | | | | | +7 2181 | 839 |
| 840 | 98·21 | 3 | 77 43 44·8 | +16·476 | +0·262 | −0·029 | 1370 | 19157 | 838 | | | 2744 | +12 2090 | 840 |
| 841 | 97·90 | 3 | 87 45 7·0 | +16·487 | +0·250 | | | 19175 | 847 | 3869 | | | +2 2246 | 841 |
| 842 | 98·57 | 3 | 78 6 32·2 | +16·520 | +0·260 | | | | | | | 2746 | +12 2093 | 842 |
| 843 | 98·90 | 3 | 78 6 25·8 | +16·535 | +0·260 | +0·020 | 1373 | 19197 | | | | 2748 | +12 2096 | 843 |
| 844 | 98·59 | 3 | 89 25 47·0 | +16·678 | +0·242 | | | 19286 | 934 | | | | +0 2566 | 844 |
| 845 | 98·24 | 3 | 85 11 15·9 | +16·687 | +0·246 | +0·028 | 1380 | 19290 | 930 | 3882 | | | +5 2240 | 845 |
| 846 | 96·25 | 3 | 76 27 58·2 | +16·703 | +0·255 | +0·004 | 1381 | 19293 | 937 | | | 2753 | +13 2164 | 846 |
| 847 | 98·57 | 3 | 87 4 45·2 | +16·772 | +0·241 | −0·129 | 1386 | 19340 | | 3893 | | | +3 2280 | 847 |
| 848 | 99·25 | 3 | 89 27 16·3 | +16·773 | +0·239 | | | 19343 | 970 | | | | +0 2573 | 848 |
| 849 | 97·51 | 6 | 63 31 18·8 | +16·773 | +0·267 | +0·045 | 1384 | 19322 | | | 2537 | 2758 | +26 2019 | 849 |
| 850 | 96·24 | 3 | 83 34 14·1 | +16·839 | +0·243 | | | 19376 | 996 | | | | +6 2224 | 850 |
| 851 | 02·23 | 3 | 88 34 55·6 | +16·885 | +0·236 | | | 19394 | 1015 | 3903 | | | +1 2381 | 851 |
| 852 | 96·27 | 3 | 80 35 34·5 | +16·965 | +0·241 | −0·028 | 1393 | 19440 | 1047 | | 2553 | 2773 | +9 2262 | 852 |
| 853 | 97·95 | 3 | 85 16 52·8 | +16·987 | +0·235 | +0·047 | | 19473 | 1057 | 3911 | | | +4 2269 | 853 |
| 854 | 02·23 | 3 | 89 37 36·1 | +17·018 | +0·230 | | | | 1076 | | | | +0 2590 | 854 |
| 855 | 95·28 | 3 | 117 0 0·6 | +17·023 | +0·202 | | | | | | | 2779 | | 855 |

813, 828. Authority for Proper Motions: Boss. 824. Authority for Proper Motions: Auwers (Mayer's Sternverzeichnis). 833. The Proper Motions have been specially computed for the present catalogue. 837. Authority for Proper Motions: Auwers (Berlin A). 853. Authority for Proper Motions: Porter.

| No. | Constellation. | Magnitude. | Number of Estimations. | Mean Year and Fraction of Year. | Number of Observations. | Mean R.A. | Precess. | Sec. Var. | Proper Motion. | No. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | h. m. s. | s. | s. | s. | |
| 856 | Leonis ... ... ... | 6·2 | ... | 96·27 | 3 | 9 52 49·79 | +3·1816 | −0·0082 | −0·0003 | 856 |
| 857 | 27 Leonis ... ... $\nu$ | 5·1 | ... | 97·20 | 3 | 9 52 50·59 | +3·2343 | −0·0104 | −0·0034 | 857 |
| 858 | 12 Sextantis ... ... ... | 7·2 | 3 | 98·56 | 3 | 9 54 31·84 | +3·1197 | −0·0057 | −0·0060 | 858 |
| 859 | 29 Leonis ... ... $\pi$ | 5·0 | ... | 99·25 | 17 | 9 54 55·74 | +3·1767 | −0·0080 | −0·0040 | 859 |
| 860 | Sextantis ... ... ... | 7·5 | 1 | 98·60 | 3 | 9 58 26·64 | +3·1254 | −0·0059 | | 860 |
| 861 | 13 Sextantis ... ... ... | 7·0 | 1 | 98·26 | 3 | 9 58 57·59 | +3·1162 | −0·0055 | −0·0059 | 861 |
| 862 | 30 Leonis ... ... $\eta$ | 3·6 | ... | 95·54 | 12 | 10 1 52·87 | +3·2773 | −0·0129 | −0·0013 | 862 |
| 863 | Sextantis ... ... ... | 7·2 | 1 | 97·58 | 3 | 10 2 24·79 | +3·0888 | −0·0043 | | 863 |
| 864 | 31 Leonis ... ... A | 4·6 | ... | 96·20 | 3 | 10 2 35·87 | +3·1940 | −0·0089 | −0·0082 | 864 |
| 865 | 15 Sextantis ... ... ... | 5·0 | 1 | 99·73 | 4 | 10 2 49·19 | +3·0741 | −0·0037 | −0·0030 | 865 |
| 866 | 32 Leonis ... ... $a$ | 1·4 | ... | 98·65 | 9 | 10 3 2·80 | +3·2170 | −0·0100 | −0·0182 | 866 |
| 867 | Sextantis ... ... ... | 6·6 | ... | 02·25 | 3 | 10 3 32·20 | +3·0915 | −0·0044 | | 867 |
| 868 | Sextantis ... ... ... | 7·7 | 3 | 97·95 | 3 | 10 4 14·52 | +3·1051 | −0·0050 | −0·0154 | 868 |
| 869 | 19 Sextantis ... ... ... | 5·9 | ... | 98·01 | 4 | 10 7 36·11 | +3·1290 | −0·0060 | −0·0063 | 869 |
| 870 | Sextantis ... ... ... | 7·7 | 2 | 97·55 | 3 | 10 8 2·94 | +3·1119 | −0·0052 | | 870 |
| 871 | Hydrae ... ... ... | 6·2 | ... | 95·28 | 6 | 10 8 43·39 | +2·7612 | +0·0072 | | 871 |
| 872 | 37 Leonis ... ... ... | 5·5 | ... | 96·22 | 3 | 10 11 18·64 | +3·2275 | −0·0109 | −0·0033 | 872 |
| 873 | 41 Leonis ... ... $\gamma^1$ | 2·5 | ... | 97·16 | 17 | 10 14 27·55 | +3·2930 | −0·0147 | +0·0208 | 873 |
| 874 | 41 Leonis ... ... $\gamma^2$ | 3·7 | ... | 99·98 | 4 | 10 14 27·81 | +3·2930 | −0·0147 | +0·0208 | 874 |
| 875 | Sextantis ... ... ... | 8·0* | ... | 02·23 | 3 | 10 14 31·61 | +3·0757 | −0·0034 | | 875 |
| 876 | 23 Sextantis ... ... ... | 6·3 | ... | 97·88 | 3 | 10 15 52·18 | +3·1013 | −0·0046 | −0·0017 | 876 |
| 877 | Sextantis ... ... ... | 8·0* | ... | 02·23 | 3 | 10 16 15·14 | +3·0756 | −0·0033 | | 877 |
| 878 | 42 Leonis ... ... ... | 6·1 | ... | 96·28 | 3 | 10 16 27·64 | +3·2344 | −0·0115 | −0·0051 | 878 |
| 879 | 43 Leonis ... ... ... | 6·3 | ... | 96·28 | 3 | 10 17 46·49 | +3·1441 | −0·0067 | −0·0028 | 879 |
| 880 | Sextantis ... ... ... | 6·3 | 1 | 97·96 | 3 | 10 19 2·98 | +3·1013 | −0·0045 | | 880 |
| 881 | Sextantis ... ... ... | 6·5 | 1 | 99·25 | 3 | 10 19 15·58 | +3·1015 | −0·0045 | | 881 |
| 882 | 44 Leonis ... ... ... | 5·9 | ... | 98·24 | 3 | 10 19 58·97 | +3·1652 | −0·0078 | +0·0001 | 882 |
| 883 | Sextantis ... ... ... | 6·8 | ... | 01·26 | 3 | 10 20 48·51 | +3·1064 | −0·0047 | | 883 |
| 884 | Sextantis ... ... ... | 6·6 | ... | 01·85 | 5 | 10 20 57·81 | +3·1162 | −0·0052 | | 884 |
| 885 | 42 Hydrae ... ... $\mu$ | 4·1 | ... | 97·87 | 8 | 10 21 15·18 | +2·9092 | +0·0041 | −0·0098 | 885 |
| 886 | Sextantis ... ... ... | 7·5 | 1 | 98·92 | 3 | 10 22 20·09 | +3·1121 | −0·0050 | −0·0099 | 886 |
| 887 | 45 Leonis ... ... ... | 5·9 | ... | 96·24 | 3 | 10 22 22·04 | +3·1728 | −0·0083 | −0·0011 | 887 |
| 888 | Antliae ... ... $a$ | 4·5 | ... | 95·30 | 6 | 10 22 34·48 | +2·7472 | +0·0098 | −0·0087 | 888 |
| 889 | Sextantis ... ... ... | 7·7* | ... | 01·75 | 4 | 10 23 48·39 | +3·1028 | −0·0045 | | 889 |
| 890 | Sextantis ... ... ... | 7·2 | 1 | 00·22 | 3 | 10 24 34·28 | +3·0917 | −0·0039 | −0·0100 | 890 |
| 891 | 30 Sextantis ... ... ... | 5·0 | ... | 01·79 | 4 | 10 25 10·74 | +3·0716 | −0·0028 | −0·0032 | 891 |
| 892 | 31 Sextantis ... ... ... | 7·1 | ... | 00·25 | 3 | 10 25 20·99 | +3·0977 | −0·0042 | +0·0019 | 892 |
| 893 | Sextantis ... ... ... | 7·0 | 2 | 99·26 | 4 | 10 26 26·32 | +3·1039 | −0·0045 | | 893 |
| 894 | 46 Leonis ... ... $i$ | 5·8 | ... | 96·27 | 3 | 10 26 51·47 | +3·2109 | −0·0107 | −0·0040 | 894 |
| 895 | 47 Leonis ... ... $\rho$ | 3·8 | ... | 96·78 | 15 | 10 27 32·74 | +3·1636 | −0·0079 | −0·0012 | 895 |
| 896 | 48 Leonis ... ... ... | 5·2 | ... | 98·25 | 3 | 10 29 35·00 | +3·1401 | −0·0065 | −0·0086 | 896 |
| 897 | 49 Leonis ... ... ... | 5·7 | ... | 96·28 | 3 | 10 29 47·31 | +3·1555 | −0·0074 | −0·0043 | 897 |
| 898 | Sextantis ... ... ... | 7·0 | 3 | 99·97 | 4 | 10 29 56·72 | +3·0971 | −0·0040 | | 898 |
| 899 | Sextantis ... ... ... | 7·5 | 2 | 99·25 | 3 | 10 30 51·83 | +3·1016 | −0·0043 | | 899 |
| 900 | Hydrae ... ... ... | 5·0 | ... | 95·30 | 6 | 10 32 32·12 | +2·8202 | +0·0093 | | 900 |

859. Orange-red. 868. A star (Albany 3971), magnitude 8·3, follows $14^s$, and is just over 1′ south. 870. Some fainter stars in the field, preceding. 885. Reddish-yellow. 887. B.D. magnitude, 7·0. 891. The R.A. of this star in W.B. (1) is $10^s$ too great. 896. B.D. magnitude, 6·3.

| No. | Mean Year and Fraction of Year. | Number of Observations. | Mean N.P.D. | Precess. | Sec. Var. | Proper Motion. | Auwers' Bradley, 1755. | Lalande, 1800. | Weisse's Bessel (1), 1825. | Albany (A.G.), 1875. | Radcliffe, 1890. | Greenwich, 1890. | B.D. | No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ° ′ ″ | ″ | ″ | ″ | | | | | | | ° | |
| 856 | 96·27 | 3 | 81 12 30·9 | +17·044 | +0·237 | +0·015 | 1396 | 19511 | 1086 | | 2559 | 2780 | + 9 2269 | 856 |
| 857 | 97·20 | 3 | 77 4 41·3 | +17·045 | +0·241 | +0·004 | 1395 | 19508 | | | | 2781 | +13 2183 | 857 |
| 858 | 98·56 | 3 | 86 8 14·0 | +17·122 | +0·229 | −0·039 | | 19542 | 1120 | 3928 | | 2784 | + 4 2276 | 858 |
| 859 | 98·28 | 4 | 81 28 33·5 | +17·140 | +0·233 | +0·011 | 1398 | 19549 | 1127 | | 2567 | 2787 | + 8 2301 | 859 |
| 860 | 98·60 | 3 | 85 32 43·2 | +17·297 | +0·223 | | | 19642 | 1208 | 3945 | | | + 4 2283 | 860 |
| 861 | 98·26 | 3 | 86 18 43·8 | +17·320 | +0·221 | +0·086 | 1400 | 19659 | 1222 | 3948 | | 2798 | + 3 2311 | 861 |
| 862 | 95·76 | 6 | 72 44 58·3 | +17·447 | +0·228 | −0·002 | 1403 | 19729 | | | 2596 | 2814 | +17 2171 | 862 |
| 863 | 97·58 | 3 | 88 35 35·7 | +17·470 | +0·214 | | | 19743 | 1289 | 3961 | | | + 1 2403 | 863 |
| 864 | 96·20 | 3 | 79 30 44·1 | +17·478 | +0·221 | +0·038 | 1405 | 19744 | 1290 | | | 2818 | +10 2112 | 864 |
| 865 | 99·73 | 4 | 89 52 57·4 | +17·488 | +0·212 | −0·024 | 1407 | 19753 | 1298 | | 2605 | 2819 | + 0 2615 | 865 |
| 866 | 99·41 | 3 | 77 32 38·1 | +17·497 | +0·222 | −0·018 | 1406 | 19752 | 1299 | | 2607 | 2820 | +12 2149 | 866 |
| 867 | 02·25 | 3 | 88 21 0·7 | +17·518 | +0·212 | | | | 1314 | 3967 | | | + 1 2406 | 867 |
| 868 | 97·95 | 3 | 87 8 17·8 | +17·548 | +0·212 | +0·035 | | 19782 | 6 | 3969 | | | + 3 2321 | 868 |
| 869 | 96·28 | 3 | 84 53 28·0 | +17·689 | +0·207 | −0·019 | 1417 | 19861 | 69 | | | 2830 | + 5 2301 | 869 |
| 870 | 97·55 | 3 | 86 25 54·4 | +17·707 | +0·205 | | | 19874 | 78 | 3987 | | | + 3 2334 | 870 |
| 871 | 95·27 | 3 | 116 32 5·1 | +17·735 | +0·180 | | | | | | | 2832 | | 871 |
| 872 | 96·22 | 3 | 75 46 21·9 | +17·839 | +0·207 | +0·025 | 1426 | 19946 | 138 | | | 2844 | +14 2228 | 872 |
| 873 | 97·18 | 8 | 69 39 9·1 | +17·963 | +0·206 | +0·136 | 1432 | 20023 | | | 2663 | 2857 | +20 2467 | 873 |
| 874 | 99·55 | 3 | 69 39 10·8 | +17·963 | +0·206 | +0·136 | 1432 | 20023 | | | | 2858 | +20 2467 | 874 |
| 875 | 02·23 | 3 | 89 42 27·8 | +17·966 | +0·192 | | | 20038 | 203 | | | | + 0 2641 | 875 |
| 876 | 97·88 | 3 | 87 12 25·1 | +18·018 | +0·191 | −0·018 | 1435 | 20077 | 225 | 4012 | | | + 3 2352 | 876 |
| 877 | 02·23 | 3 | 89 43 0·5 | +18·032 | +0·188 | | | 20088 | 230 | | | | + 0 2642 | 877 |
| 878 | 96·28 | 3 | 74 31 12·0 | +18·041 | +0·198 | +0·022 | 1436 | 20087 | | | | 2864 | +15 2192 | 878 |
| 879 | 96·28 | 3 | 82 56 58·3 | +18·090 | +0·190 | +0·091 | 1441 | 20131 | 256 | | 2686 | | + 7 2289 | 879 |
| 880 | 97·96 | 3 | 87 7 29·7 | +18·138 | +0·185 | | | 20170 | | 4027 | | | + 3 2358 | 880 |
| 881 | 99·25 | 3 | 87 5 57·9 | +18·146 | +0·185 | | | 20171 | | 4029 | | | + 3 2361 | 881 |
| 882 | 98·24 | 3 | 80 42 24·0 | +18·173 | +0·187 | +0·020 | | 20191 | 295 | | | 2869 | + 9 2351 | 882 |
| 883 | 01·26 | 3 | 86 33 45·4 | +18·203 | +0·182 | | | 20216 | 313 | 4034 | | | + 3 2365 | 883 |
| 884 | 00·95 | 3 | 85 33 32·5 | +18·209 | +0·183 | | | 20224 | 315 | 4036 | | | + 4 2328 | 884 |
| 885 | 98·23 | 3 | 106 19 32·9 | +18·219 | +0·169 | +0·061 | 1451 | 20257 | | | 2701 | 2872 | −16 3052 | 885 |
| 886 | 98·92 | 3 | 85 55 33·9 | +18·259 | +0·180 | +0·015 | | 20278 | 346 | 4045 | | | + 4 2333 | 886 |
| 887 | 96·24 | 3 | 79 43 39·7 | +18·260 | +0·183 | −0·015 | 1453 | 20271 | 344 | | | 2881 | +10 2152 | 887 |
| 888 | 95·29 | 4 | 120 33 30·6 | +18·267 | +0·157 | +0·001 | | | | | 2707 | 2882 | | 888 |
| 889 | 01·28 | 3 | 86 50 26·0 | +18·312 | +0·177 | | | 20323 | 374 | 4052 | | | + 3 2371 | 889 |
| 890 | 00·22 | 3 | 87 59 37·3 | +18·339 | +0·174 | +0·150 | | 20351 | 392 | 4057 | | | + 2 2323 | 890 |
| 891 | 02·28 | 3 | 90 7 26·4 | +18·360 | +0·172 | +0·011 | 1459 | 20358 | 405 | | 2720 | 2891 | + 0 2663 | 891 |
| 892 | 00·25 | 3 | 87 20 10·0 | +18·366 | +0·174 | +0·019 | 1460 | 20367 | 404 | 4061 | | | + 2 2325 | 892 |
| 893 | 97·94 | 3 | 86 38 27·8 | +18·404 | +0·172 | | | 20388 | 421 | 4063 | | | + 3 2379 | 893 |
| 894 | 96·27 | 3 | 75 20 58·0 | +18·419 | +0·177 | −0·024 | 1463 | 20400 | 424 | | | 2899 | +14 2255 | 894 |
| 895 | 95·63 | 3 | 80 10 43·2 | +18·443 | +0·173 | −0·011 | 1467 | 20421 | 438 | | 2730 | 2901 | +10 2166 | 895 |
| 896 | 98·25 | 3 | 82 31 52·1 | +18·512 | +0·168 | −0·067 | 1468 | 20473 | 476 | | 2738 | | + 7 2330 | 896 |
| 897 | 96·28 | 3 | 80 49 58·5 | +18·518 | +0·169 | −0·007 | 1469 | 20478 | 482 | | | 2906 | + 9 2374 | 897 |
| 898 | 98·90 | 3 | 87 16 43·5 | +18·524 | +0·165 | | | 20484 | 489 | 4077 | | | + 2 2334 | 898 |
| 899 | 99·25 | 3 | 86 44 6·9 | +18·555 | +0·164 | | | 20506 | 504 | 4079 | | | + 3 2394 | 899 |
| 900 | 95·31 | 4 | 116 53 39·6 | +18·609 | +0·145 | | | | | | 2755 | | | 900 |

858. Authority for Proper Motions: Auwers (Astronomische Nachrichten, 3511). 862. The sign of the Proper Motion in R.A. has been adopted on the authority of Auwers (Astronomische Nachrichten, 3508, p. 55). 868. The Proper Motion adopted is the mean of Bossert and Porter. 882. Authority for Proper Motions: Auwers (Mayer's Sternverzeichnis). 886. Authority for Proper Motions: Boss. 888. Authority for Proper Motions: Auwers (Catalog der Fundamental-Sterne). 890. Authority for Proper Motions: Porter.

| No. | Constellation. | Magnitude. | Number of Estimations. | Mean Year and Fraction of Year. | Number of Observations. | Mean R.A. | Precess. | Sec. Var. | Proper Motion. | No. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | h. m. s. | s. | s. | s. | |
| 901 | 50 Leonis ... ... ... | 6·7 | ... | 96·22 | 3 | 10 33 32·75 | +3·2200 | −0·0117 | +0·0019 | 901 |
| 902 | Sextantis ... ... ... | 7·5 | 1 | 02·49 | 4 | 10 36 3·41 | +3·0748 | −0·0026 | | 902 |
| 903 | Sextantis ... ... ... | 7·6 | ... | 98·60 | 3 | 10 37 13·65 | +3·0842 | −0·0031 | | 903 |
| 904 | 34 Sextantis ... ... ... | 6·9 | 4 | 99·54 | 10 | 10 37 27·61 | +3·1065 | −0·0045 | −0·0090 | 904 |
| 905 | 35 Sextantis ... ... ... | 6·1 | ... | 96·28 | 3 | 10 38 9·41 | +3·1158 | −0·0050 | 0·0000 | 905 |
| 906 | Sextantis ... ... ... | 7·3 | 1 | 99·99 | 4 | 10 39 51·48 | +3·1034 | −0·0042 | | 906 |
| 907 | 36 Sextantis ... ... ... | 6·6 | ... | 96·96 | 3 | 10 40 0·27 | +3·0968 | −0·0038 | −0·0053 | 907 |
| 908 | 37 Sextantis ... ... ... | 6·3 | ... | 98·26 | 3 | 10 40 53·23 | +3·1275 | −0·0058 | −0·0029 | 908 |
| 909 | Leonis ... ... ... | 6·8 | ... | 98·28 | 3 | 10 41 1·77 | +3·1793 | −0·0094 | | 909 |
| 910 | 52 Leonis ... ... $k$ | 5·6 | ... | 97·65 | 3 | 10 41 7·47 | +3·1913 | −0·0102 | −0·0109 | 910 |
| 911 | 53 Leonis ... ... $l$ | 5·3 | ... | 97·69 | 19 | 10 44 0·07 | +3·1579 | −0·0080 | −0·0015 | 911 |
| 912 | Leonis ... ... ... | 7·5 | 2 | 98·30 | 3 | 10 45 46·92 | +3·1034 | −0·0041 | | 912 |
| 913 | Leonis ... ... ... | 7·0 | 1 | 97·64 | 3 | 10 47 5·40 | +3·0841 | −0·0028 | | 913 |
| 914 | Leonis ... ... ... | 7·0 | 1 | 99·23 | 3 | 10 47 28·70 | +3·0751 | −0·0021 | | 914 |
| 915 | Leonis ... ... ... | 7·3 | 4 | 00·01 | 4 | 10 47 36·14 | +3·0919 | −0·0033 | | 915 |
| 916 | 55 Leonis ... ... ... | 6·3 | 4 | 97·97 | 4 | 10 50 33·72 | +3·0816 | −0·0024 | +0·0057 | 916 |
| 917 | 56 Leonis ... ... ... | 6·1 | ... | 96·28 | 3 | 10 50 49·96 | +3·1195 | −0·0053 | −0·0018 | 917 |
| 918 | 57 Leonis ... ... ... | 6·9 | 2 | 98·27 | 3 | 10 51 2·71 | +3·0794 | −0·0023 | +0·0005 | 918 |
| 919 | Leonis ... ... ... | 7·3 | 1 | 01·79 | 4 | 10 52 1·32 | +3·0742 | −0·0019 | | 919 |
| 920 | Leonis ... ... ... | 7·9 | 3 | 02·30 | 3 | 10 53 39·30 | +3·0878 | −0·0028 | | 920 |
| 921 | 58 Leonis ... ... $d$ | 5·4 | 2 | 98·23 | 17 | 10 55 23·76 | +3·0997 | −0·0037 | −0·0018 | 921 |
| 922 | 59 Leonis ... ... $c$ | 5·1 | ... | 96·22 | 3 | 10 55 33·76 | +3·1159 | −0·0050 | −0·0057 | 922 |
| 923 | Leonis ... ... ... | 6·9 | 2 | 99·51 | 4 | 10 58 7·61 | +3·0714 | −0·0013 | 0·0000 | 923 |
| 924 | 62 Leonis ... ... $p^2$ | 6·1 | ... | 96·95 | 3 | 10 58 29·49 | +3·0761 | −0·0017 | −0·0071 | 924 |
| 925 | Leonis ... ... ... | 7·7 | 2 | 99·93 | 3 | 10 58 49·45 | +3·0985 | −0·0036 | −0·0033 | 925 |
| 926 | Leonis ... ... ... | 6·7 | ... | 98·26 | 3 | 10 59 18·27 | +3·1548 | −0·0085 | | 926 |
| 927 | 63 Leonis ... ... $\chi$ | 4·6 | ... | 98·70 | 12 | 10 59 51·51 | +3·1207 | −0·0055 | −0·0255 | 927 |
| 928 | Hydrae ... ... $\chi^1$ | 5·0 | ... | 95·31 | 5 | 11 0 30·82 | +2·8998 | +0·0117 | −0·0173 | 928 |
| 929 | Leonis ... ... ... | 7·3 | 2 | 97·97 | 3 | 11 0 54·10 | +3·0831 | −0·0022 | | 929 |
| 930 | 65 Leonis ... ... $p^3$ | 5·9 | 2 | 96·27 | 3 | 11 1 48·17 | +3·0874 | −0·0025 | −0·0287 | 930 |
| 931 | 69 Leonis ... ... $p^5$ | 6·1 | 1 | 97·23 | 4 | 11 8 38·40 | +3·0752 | −0·0012 | −0·0028 | 931 |
| 932 | Leonis ... ... ... | 7·1 | 3 | 97·30 | 3 | 11 8 44·98 | +3·0873 | −0·0024 | | 932 |
| 933 | 68 Leonis ... ... $\delta$ | 2·5 | ... | 97·27 | 19 | 11 8 47·42 | +3·1869 | −0·0130 | +0·0102 | 933 |
| 934 | Leonis ... ... ... | 5·8 | ... | 96·28 | 3 | 11 8 50·05 | +3·1175 | −0·0055 | | 934 |
| 935 | 75 Leonis ... ... ... | 6·0 | 1 | 98·03 | 4 | 11 12 8·58 | +3·0851 | −0·0021 | +0·0023 | 935 |
| 936 | 76 Leonis ... ... ... | 7·0 | 1 | 96·62 | 3 | 11 13 47·00 | +3·0830 | −0·0018 | −0·0051 | 936 |
| 937 | 12 Crateris ... ... $\delta$ | 3·7 | ... | 98·29 | 8 | 11 14 20·36 | +3·0056 | +0·0065 | −0·0106 | 937 |
| 938 | Leonis ... ... ... | 8·0 | 1 | 02·30 | 3 | 11 14 35·51 | +3·0919 | −0·0028 | | 938 |
| 939 | Hydrae ... ... ... | 6·7 | ... | 96·71 | 5 | 11 15 26·37 | +2·9366 | +0·0136 | −0·0200 | 939 |
| 940 | 77 Leonis ... ... $\sigma$ | 4·2 | ... | 96·98 | 3 | 11 15 58·79 | +3·1021 | −0·0040 | −0·0071 | 940 |
| 941 | Leonis ... ... ... | 6·6 | ... | 98·30 | 3 | 11 16 18·45 | +3·1046 | −0·0043 | −0·0160 | 941 |
| 942 | Leonis ... ... ... | 7·0 | ... | 98·97 | 3 | 11 18 5·07 | +3·1032 | −0·0042 | | 942 |
| 943 | Leonis ... ... ... | 6·3 | ... | 96·26 | 3 | 11 18 10·70 | +3·0756 | −0·0008 | | 943 |
| 944 | 78 Leonis ... ... $\iota$ | 4·1 | ... | 96·29 | 3 | 11 18 42·62 | +3·1196 | −0·0064 | +0·0085 | 944 |
| 945 | 79 Leonis ... ... ... | 5·5 | ... | 96·97 | 3 | 11 18 54·34 | +3·0809 | −0·0014 | −0·0034 | 945 |

905. Faint companion precedes south. 925. Very close double. Observed as one mass. 929, 935. Orange.
934. B.D. magnitude, 7·0. 936. Harvard magnitude, 6·0; B.D., 6·5. 944. A close faint companion follows north.

| No. | Mean Year and Fraction of Year. | Number of Observations. | Mean N.P.D. | Precess. | Sec. Var. | Proper Motion. | Auwers' Bradley, 1755. | Lalande, 1800. | Weisse's Bessel (1), 1825. | Albany (A. G.), 1875. | Radcliffe, 1890. | Greenwich, 1890. | B.D. | No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ° ′ ″ | ″ | ″ | ″ | | | | | | | ° | |
| 901 | 96·22 | 3 | 73 21 6·2 | +18·642 | +0·165 | +0·008 | 1478 | 20570 | | | | | +16 2144 | 901 |
| 902 | 02·25 | 3 | 89 45 11·3 | +18·722 | +0·153 | | | 20632 | 594 | | | | + 0 2693 | 902 |
| 903 | 98·60 | 3 | 88 36 53·5 | +18·759 | +0·151 | | | | 624 | 4102 | | | + 1 2471 | 903 |
| 904 | 98·76 | 6 | 85 53 39·6 | +18·766 | +0·151 | −0·033 | 1484 | 20672 | 626 | 4103 | 2775 | 2933 | + 4 2375 | 904 |
| 905 | 96·28 | 3 | 84 43 39·5 | +18·787 | +0·151 | +0·009 | 1487 | 20692 | 641 | | 2781 | | + 5 2384 | 905 |
| 906 | 98·92 | 3 | 86 10 2·2 | +18·839 | +0·147 | | | 20720 | 665 | 4117 | | | + 4 2378 | 906 |
| 907 | 96·96 | 3 | 86 59 9·8 | +18·843 | +0·146 | −0·006 | 1491 | 20727 | | 4118 | 2785 | | + 3 2408 | 907 |
| 908 | 98·26 | 3 | 83 5 57·7 | +18·869 | +0·146 | +0·028 | 1493 | 20747 | 677 | | | 2947 | + 7 2356 | 908 |
| 909 | 98·28 | 3 | 76 43 29·4 | +18·874 | +0·149 | | | 20748 | | | | 2948 | +13 2302 | 909 |
| 910 | 97·65 | 3 | 75 16 37·2 | +18·876 | +0·149 | +0·064 | 1494 | 20751 | | | | 2951 | +14 2294 | 910 |
| 911 | 95·71 | 9 | 78 55 31·8 | +18·960 | +0·142 | +0·020 | 1500 | 20826 | 743 | | 2804 | 2962 | +11 2283 | 911 |
| 912 | 98·30 | 3 | 85 52 45·5 | +19·010 | +0·136 | | | 20874 | 779 | 4145 | | | + 4 2388 | 912 |
| 913 | 97·64 | 3 | 88 26 37·6 | +19·046 | +0·132 | | | 20919 | 817 | 4156 | 2817 | | + 1 2495 | 913 |
| 914 | 99·23 | 3 | 89 40 11·2 | +19·057 | +0·131 | | | 20929 | | | | | + 0 2710 | 914 |
| 915 | 98·95 | 3 | 87 21 20·7 | +19·060 | +0·132 | | | 20934 | 824 | 4159 | | | + 2 2367 | 915 |
| 916 | 96·23 | 3 | 88 43 47·4 | +19·139 | +0·126 | −0·008 | 1517 | 21006 | 876 | 4168 | 2835 | | + 1 2501 | 916 |
| 917 | 96·28 | 3 | 83 16 50·9 | +19·146 | +0·127 | −0·027 | 1519 | 21019 | 881 | | | 2983 | + 6 2369 | 917 |
| 918 | 98·27 | 3 | 89 2 1·2 | +19·151 | +0·125 | +0·010 | 1520 | 21027 | 884 | 4169 | | | + 1 2502 | 918 |
| 919 | 02·27 | 3 | 89 46 36·1 | +19·176 | +0·123 | | | 21045 | 903 | | 2839 | | + 0 2718 | 919 |
| 920 | 02·30 | 3 | 87 44 2·4 | +19·218 | +0·120 | | | 21086 | 923 | 4176 | | | + 2 2373 | 920 |
| 921 | 96·89 | 5 | 85 50 43·9 | +19·261 | +0·117 | +0·012 | 1526 | 21125 | 952 | 4182 | 2851 | 3002 | + 4 2407 | 921 |
| 922 | 96·22 | 3 | 83 21 40·3 | +19·265 | +0·118 | 0·000 | 1527 | 21131 | 960 | | | 3003 | + 6 2384 | 922 |
| 923 | 00·27 | 5 | 90 12 38·9 | +19·326 | +0·111 | +0·120 | | 21200 | 1002 | | 2862 | | + 0 2728 | 923 |
| 924 | 96·95 | 3 | 89 27 44·0 | +19·334 | +0·111 | −0·017 | 1533 | 21208 | 1007 | | 2865 | 3012 | + 0 2729 | 924 |
| 925 | 99·93 | 3 | 85 49 20·5 | +19·342 | +0·111 | +0·004 | | 21216 | 1014 | 4189 | | | + 4 2415 | 925 |
| 926 | 98·26 | 3 | 76 47 37·3 | +19·353 | +0·112 | | | | 1025 | | | 3014 | +13 2348 | 926 |
| 927 | 98·62 | 3 | 82 7 23·5 | +19·366 | +0·110 | +0·022 | 1535 | 21242 | 1036 | | 2872 | 3015 | + 8 2455 | 927 |
| 928 | 95·30 | 4 | 116 45 12·7 | +19·381 | +0·100 | +0·008 | 1536 | 21260 | | | 2873 | | | 928 |
| 929 | 97·97 | 3 | 88 14 55·9 | +19·389 | +0·106 | | | 21262 | 1051 | 4196 | | | + 1 2519 | 929 |
| 930 | 96·27 | 3 | 87 30 6·4 | +19·409 | +0·105 | +0·060 | 1539 | 21295 | 1073 | 4201 | | | + 2 2387 | 930 |
| 931 | 96·21 | 3 | 89 31 31·1 | +19·551 | +0·091 | −0·011 | 1547 | 21464 | 81 | | | | + 0 2761 | 931 |
| 932 | 97·30 | 3 | 87 11 9·7 | +19·553 | +0·092 | | | 21467 | 83 | 4225 | | | + 3 2475 | 932 |
| 933 | 96·16 | 7 | 68 55 41·4 | +19·554 | +0·095 | +0·115 | 1546 | 21461 | | | 2905 | 3045 | +21 2298 | 933 |
| 934 | 96·28 | 3 | 81 23 31·2 | +19·554 | +0·092 | | | 21468 | 85 | | | 3046 | + 8 2476 | 934 |
| 935 | 96·30 | 3 | 87 26 22·6 | +19·617 | +0·085 | +0·142 | 1552 | 21542* | 154 | 4235 | | | + 2 2409 | 935 |
| 936 | 96·62 | 3 | 87 48 5·4 | +19·646 | +0·082 | +0·047 | 1556 | 21575 | 182 | 4243 | | 3068 | + 2 2411 | 936 |
| 937 | 00·99 | 3 | 104 14 14·6 | +19·655 | +0·078 | −0·209 | 1557 | 21589 | 198 | | 2930 | 3069 | −13 3345 | 937 |
| 938 | 02·30 | 3 | 85 49 52·2 | +19·660 | +0·080 | | | 21593 | 201 | 4247 | | | + 4 2449 | 938 |
| 939 | 00·00 | 3 | 117 47 4·9 | +19·674 | +0·074 | −0·010 | | | | | | | | 939 |
| 940 | 96·98 | 3 | 83 25 20·8 | +19·683 | +0·078 | 0·000 | 1558 | 21632 | 223 | | | 3073 | + 6 2437 | 940 |
| 941 | 98·30 | 3 | 82 49 0·4 | +19·689 | +0·077 | 0·000 | | 21640 | 230 | | | | + 7 2440 | 941 |
| 942 | 98·97 | 3 | 82 51 54·2 | +19·718 | +0·074 | | | 21679 | 260 | | | | + 7 2443 | 942 |
| 943 | 96·26 | 3 | 89 19 9·0 | +19·719 | +0·073 | | | 21684 | 262 | 4260 | | 3081 | + 0 2782 | 943 |
| 944 | 96·29 | 3 | 78 55 11·3 | +19·728 | +0·073 | +0·063 | 1560 | 21693 | 269 | | | 3083 | +11 2348 | 944 |
| 945 | 96·97 | 3 | 88 2 35·5 | +19·731 | +0·072 | −0·008 | 1562 | 21700 | 273 | 4263 | 2947 | 3085 | + 2 2418 | 945 |

923. Authority for Proper Motions: Radcliffe, 1890, 2862. 925. Authority for Proper Motions: Auwers (Mayer's Sternverzeichnis). 939. The Proper Motions have been specially computed for the present catalogue. 941. Authority for Proper Motions: Porter.

| No. | Constellation. | Magnitude. | Number of Estimations. | Mean Year and Fraction of Year. | Number of Observations. | Mean R.A. | Precess. | Sec. Var. | Proper Motion. | No. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | h. m. s. | s. | s. | s. | |
| 946 | Leonis ... ... ... | 6·1 | ... | 98·29 | 3 | 11 19 47·74 | +3·1222 | −0·0068 | | 946 |
| 947 | 82 Leonis ... ... ... | 6·7 | ... | 99·62 | 3 | 11 20 30·93 | +3·0882 | −0·0023 | −0·0035 | 947 |
| 948 | 80 Leonis ... ... ... | 6·4 | ... | 00·32 | 3 | 11 20 41·59 | +3·0903 | −0·0026 | −0·0065 | 948 |
| 949 | 83 Leonis ... ... ... | 6·3 | ... | 96·30 | 3 | 11 21 41·54 | +3·0866 | −0·0021 | −0·0514 | 949 |
| 950 | Leonis ... ... ... | 7·8* | ... | 99·30 | 3 | 11 22 14·41 | +3·0801 | −0·0012 | −0·0010 | 950 |
| 951 | 84 Leonis ... ... $\tau$ | 5·2 | ... | 97·55 | 12 | 11 22 47·63 | +3·0856 | −0·0019 | −0·0010 | 951 |
| 952 | Leonis ... ... ... | 8·0 | 2 | 02·30 | 3 | 11 24 12·53 | +3·0735 | −0·0002 | | 952 |
| 953 | Leonis ... ... ... | 6·7 | ... | 98·31 | 3 | 11 24 30·01 | +3·1023 | −0·0044 | −0·0032 | 953 |
| 954 | Leonis ... ... ... | 7·7 | 2 | 97·65 | 3 | 11 26 14·77 | +3·0851 | −0·0019 | | 954 |
| 955 | Hydrae ... ... ... | 6·0‡ | ... | 95·35 | 3 | 11 27 18·65 | +2·9686 | +0·0152 | +0·0020 | 955 |
| 956 | Hydrae ... ... ... | 6·0‡ | ... | 95·35 | 3 | 11 27 19·00 | +2·9686 | +0·0152 | +0·0020 | 956 |
| 957 | Hydrae ... ... $\xi$ | 3·8 | ... | 95·31 | 5 | 11 28 4·91 | +2·9599 | +0·0168 | −0·0166 | 957 |
| 958 | Leonis ... ... ... | 6·7 | ... | 97·28 | 3 | 11 28 27·98 | +3·0825 | −0·0015 | | 958 |
| 959 | 89 Leonis ... ... ... | 5·7 | ... | 96·26 | 3 | 11 29 14·87 | +3·0840 | −0·0017 | −0·0128 | 959 |
| 960 | Leonis ... ... ... | 7·0 | ... | 98·30 | 3 | 11 31 25·79 | +3·0921 | −0·0032 | | 960 |
| 961 | Hydrae ... ... ... | 5·8 | ... | 00·32 | 3 | 11 31 37·15 | +2·9654 | +0·0183 | +0·0140 | 961 |
| 962 | 91 Leonis ... ... $\upsilon$ | 4·3 | 1 | 98·20 | 9 | 11 31 49·67 | +3·0719 | +0·0005 | −0·0018 | 962 |
| 963 | Virginis ... ... ... | 7·0 | 1 | 98·33 | 3 | 11 32 8·87 | +3·0921 | −0·0033 | | 963 |
| 964 | 1 Virginis ... ... $\omega$ | 5·5 | ... | 96·30 | 3 | 11 33 18·20 | +3·0965 | −0·0042 | −0·0020 | 964 |
| 965 | Leonis ... ... ... | 7·4 | 2 | 97·29 | 4 | 11 35 16·44 | +3·0765 | −0·0003 | | 965 |
| 966 | 92 Leonis ... ... ... | 5·4 | ... | 96·47 | 6 | 11 35 35·11 | +3·1299 | −0·0119 | −0·0049 | 966 |
| 967 | Leonis ... ... ... | 7·5 | 1 | 01·65 | 3 | 11 35 48·51 | +3·0724 | +0·0006 | | 967 |
| 968 | Virginis ... ... ... | 7·3 | 1 | 97·32 | 3 | 11 37 18·00 | +3·0795 | −0·0009 | | 968 |
| 969 | 2 Virginis ... ... $\xi$ | 4·8 | ... | 97·68 | 5 | 11 40 7·77 | +3·0907 | −0·0039 | +0·0035 | 969 |
| 970 | 3 Virginis ... ... $\nu$ | 4·0 | 1 | 96·29 | 3 | 11 40 43·15 | +3·0867 | −0·0029 | −0·0026 | 970 |
| 971 | Virginis ... ... ... | 7·1 | ... | 98·54 | 4 | 11 40 57·66 | +3·0878 | −0·0033 | | 971 |
| 972 | Virginis ... ... ... | 8·0 | 1 | 02·28 | 3 | 11 41 38·94 | +3·0803 | −0·0013 | | 972 |
| 973 | 4 Virginis ... ... A[1] | 5·3 | 1 | 97·09 | 4 | 11 42 46·64 | +3·0883 | −0·0037 | −0·0048 | 973 |
| 974 | Hydrae ... ... ... | 5·3 | ... | 95·31 | 4 | 11 43 41·98 | +3·0260 | +0·0152 | | 974 |
| 975 | Virginis ... ... ... | 7·0 | 1 | 97·27 | 3 | 11 43 55·29 | +3·0731 | +0·0009 | −0·0150 | 975 |
| 976 | 94 Leonis ... ... $\beta$ | 2·2 | ... | 99·44 | 9 | 11 43 57·52 | +3·0980 | −0·0072 | −0·0356 | 976 |
| 977 | Virginis ... ... ... | 6·7 | ... | 98·30 | 3 | 11 43 59·52 | +3·0821 | −0·0020 | 0·0000 | 977 |
| 978 | Virginis ... ... ... | 7·8 | 1 | 97·98 | 3 | 11 44 38·97 | +3·0771 | −0·0004 | | 978 |
| 979 | 5 Virginis ... ... $\beta$ | 3·0 | 1 | 98·97 | 11 | 11 45 29·12 | +3·0762 | −0·0001 | +0·0481 | 979 |
| 980 | Virginis ... ... ... | 5·5 | 1 | 00·82 | 4 | 11 45 55·50 | +3·0659 | +0·0036 | | 980 |
| 981 | 64 Ursae Majoris ... $\gamma$ | 2·5 | ... | 96·28 | 3 | 11 48 34·27 | +3·1653 | −0·0427 | +0·0098 | 981 |
| 982 | Virginis ... ... ... | 6·4 | ... | 97·81 | 4 | 11 48 43·05 | +3·0740 | +0·0007 | | 982 |
| 983 | Hydrae ... ... ... | 5·5 | ... | 95·31 | 4 | 11 49 37·00 | +3·0443 | +0·0151 | | 983 |
| 984 | Virginis ... ... ... | 7·4 | 1 | 01·80 | 4 | 11 53 5·68 | +3·0737 | +0·0008 | | 984 |
| 985 | Virginis ... ... ... | 7·1 | 2 | 97·29 | 3 | 11 53 6·36 | +3·0756 | −0·0006 | +0·0002 | 985 |
| 986 | Virginis ... ... ... | 6·3 | 1 | 97·35 | 3 | 11 53 56·33 | +3·0734 | +0·0010 | −0·0062 | 986 |
| 987 | Virginis ... ... ... | 6·8 | 3 | 97·64 | 3 | 11 54 16·63 | +3·0741 | +0·0003 | | 987 |
| 988 | 7 Virginis ... ... $b$ | 5·7 | 1 | 96·33 | 3 | 11 54 49·54 | +3·0749 | −0·0006 | −0·0022 | 988 |
| 989 | 8 Virginis ... ... $\pi$ | 4·0 | 1 | 98·24 | 12 | 11 55 44·88 | +3·0758 | −0·0021 | −0·0028 | 989 |
| 990 | Virginis ... ... ... | 6·5 | ... | 98·30 | 3 | 11 58 38·13 | +3·0736 | −0·0014 | −0·0127 | 990 |

949. North preceding and brighter of two stars. 962. Red. 978. The Declination of this star in W. B. (1) appears to be 10° too great.

| No. | Mean Year and Fraction of Year. | Number of Observations. | Mean N.P.D. | Precess. | Sec. Var. | Proper Motion. | Auwers' Bradley, 1755. | Lalande, 1800. | Weisse's Bessel (1), 1825. | Albany (A.G.), 1875. | Radcliffe, 1890. | Greenwich, 1890. | B.D. | No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ° ′ ″ | ″ | ″ | ″ | | | | | | | ° | |
| 946 | 98·29 | 3 | 78 1 11·0 | +19·744 | +0·071 | | | 21722 | 287 | | | | +12 2335 | 946 |
| 947 | 99·62 | 3 | 86 8 53·1 | +19·755 | +0·069 | +0·030 | 1566 | 21744 | 305 | 4268 | | 3089 | + 4 2461 | 947 |
| 948 | 00·98 | 3 | 85 35 20·0 | +19·758 | +0·068 | +0·041 | 1567 | 21749 | 310 | 4272 | | | + 4 2463 | 948 |
| 949 | 96·30 | 3 | 86 26 30·8 | +19·773 | +0·066 | −0·181 | 1568 | 21781 | 330 | 4278 | 2960 | 3092 | + 3 2502 | 949 |
| 950 | 99·30 | 3 | 88 4 23·2 | +19·781 | +0·065 | +0·130 | | 21798 | 337 | 4280 | | | + 2 2431 | 950 |
| 951 | 96·06 | 4 | 86 35 34·7 | +19·788 | +0·064 | +0·006 | 1570 | 21817 | 348 | 4284 | 2965 | 3097 | + 3 2504 | 951 |
| 952 | 02·30 | 3 | 89 47 29·1 | +19·808 | +0·061 | | | 21850 | 378 | | | | + 0 2793 | 952 |
| 953 | 98·31 | 3 | 81 50 55·4 | +19·812 | +0·061 | +0·011 | | 21860 | 381 | | | | + 8 2512 | 953 |
| 954 | 97·65 | 3 | 86 23 8·4 | +19·835 | +0·058 | | | 21895 | 409 | 4297 | | | + 3 2513 | 954 |
| 955 | 02·31 | 3 | 118 42 54·5 | +19·848 | +0·053 | −0·180 | 1578 | | | | 2990 | | | 955 |
| 956 | 02·31 | 3 | 118 42 46·6 | +19·849 | +0·053 | −0·180 | 1578 | | | | 2991 | | | 956 |
| 957 | 95·30 | 3 | 121 18 16·5 | +19·858 | +0·051 | +0·025 | 1580 | | | | 2995 | 3125 | | 957 |
| 958 | 97·28 | 3 | 86 56 53·5 | +19·863 | +0·053 | | | | 448 | 4305 | | | + 3 2519 | 958 |
| 959 | 96·26 | 3 | 86 23 3·3 | +19·874 | +0·052 | +0·089 | 1582 | 21965 | 459 | 4307 | | 3127 | + 3 2521 | 959 |
| 960 | 98·30 | 3 | 83 20 12·9 | +19·897 | +0·048 | | | 22008 | 503 | | | | + 6 2470 | 960 |
| 961 | 02·81 | 2 | 123 0 57·6 | +19·899 | +0·045 | −0·006 | 1587 | | | | 3008 | | | 961 |
| 962 | 96·92 | 5 | 90 16 16·9 | +19·901 | +0·046 | −0·047 | 1586 | 22022 | 511 | | 3010 | 3133 | − 0 2458 | 962 |
| 963 | 99·99 | 5 | 83 10 35·6 | +19·904 | +0·046 | | | 22030 | 514 | | | | + 7 2465 | 963 |
| 964 | 96·30 | 3 | 81 18 43·9 | +19·916 | +0·044 | +0·001 | 1590 | 22066 | 538 | | 3014 | 3139 | + 8 2532 | 964 |
| 965 | 97·29 | 4 | 88 29 36·5 | +19·936 | +0·040 | | | 22109 | 571 | 4327 | | | + 1 2597 | 965 |
| 966 | 99·96 | 3 | 68 5 29·8 | +19·938 | +0·040 | +0·049 | 1592 | 22111 | | | 3028 | 3148 | +22 2391 | 966 |
| 967 | 02·30 | 3 | 90 7 10·1 | +19·941 | +0·039 | | | | 583 | | 3030 | | + 0 2821 | 967 |
| 968 | 97·32 | 3 | 87 4 56·3 | +19·954 | +0·036 | | | 22155 | 609 | 4338 | | | + 3 2539 | 968 |
| 969 | 96·27 | 3 | 81 11 9·2 | +19·977 | +0·030 | +0·008 | 1599 | 22223 | 660 | | | 3158 | + 9 2545 | 969 |
| 970 | 96·29 | 3 | 82 54 37·0 | +19·981 | +0·029 | +0·165 | 1601 | 22242 | 668 | | 3052 | 3159 | + 7 2479 | 970 |
| 971 | 98·29 | 3 | 82 16 8·8 | +19·983 | +0·029 | | | 22248 | 672 | | | | + 7 2480 | 971 |
| 972 | 02·28 | 3 | 85 58 10·6 | +19·988 | +0·027 | | | 22264 | 686 | 4350 | | | + 4 2526 | 972 |
| 973 | 96·35 | 3 | 81 11 54·7 | +19·996 | +0·025 | −0·024 | 1602 | 22292 | 706 | | | 3164 | + 9 2549 | 973 |
| 974 | 95·31 | 4 | 116 11 36·7 | +20·001 | +0·023 | | | | | | 3065 | | | 974 |
| 975 | 97·27 | 3 | 89 45 46·3 | +20·003 | +0·023 | 0·000 | | 22312 | 719 | | | 3165 | + 0 2843 | 975 |
| 976 | 98·33 | 3 | 74 52 7·7 | +20·003 | +0·023 | +0·098 | 1605 | 22314 | | | 3067 | 3166 | +15 2383 | 976 |
| 977 | 98·30 | 3 | 84 15 23·4 | +20·003 | +0·023 | +0·180 | | 22322 | 722 | | | 3167 | + 5 2545 | 977 |
| 978 | 97·98 | 3 | 87 12 42·2 | +20·007 | +0·021 | | | 22330 | 734 | 4356 | | | + 3 2560 | 978 |
| 979 | 99·32 | 3 | 87 40 17·8 | +20·012 | +0·020 | +0·262 | 1606 | 22341 | 745 | 4361 | 3071 | 3169 | + 2 2489 | 979 |
| 980 | 01·00 | 3 | 94 46 37·5 | +20·014 | +0·019 | | | 22361 | 753 | | 3072 | | − 4 3152 | 980 |
| 981 | 96·28 | 3 | 35 44 56·9 | +20·027 | +0·014 | −0·008 | 1608 | 22411 | | | 3086 | 3177 | +54 1475 | 981 |
| 982 | 97·31 | 3 | 88 53 29·9 | +20·028 | +0·014 | | | 22421 | 794 | 4369 | | | + 1 2624 | 982 |
| 983 | 95·31 | 4 | 115 9 33·6 | +20·032 | +0·012 | | | 22439 | | | 3089 | | | 983 |
| 984 | 02·28 | 3 | 88 34 22·5 | +20·043 | +0·005 | | | 22538 | 868 | 4385 | | | + 1 2633 | 984 |
| 985 | 97·29 | 3 | 85 57 39·8 | +20·043 | +0·005 | +0·005 | 1616 | 22537 | 869 | 4386 | | | + 4 2553 | 985 |
| 986 | 97·35 | 3 | 88 54 48·1 | +20·045 | +0·003 | −0·044 | | 22555 | 883 | 4389 | | 3191 | + 1 2636 | 986 |
| 987 | 97·64 | 3 | 87 36 55·0 | +20·046 | +0·003 | | | | 889 | 4390 | | | + 2 2499 | 987 |
| 988 | 96·33 | 3 | 85 47 16·0 | +20·047 | +0·002 | −0·015 | 1617 | 22571 | 899 | 4392 | | 3193 | + 4 2556 | 988 |
| 989 | 97·06 | 4 | 82 49 40·8 | +20·049 | 0·000 | +0·017 | 1618 | 22590 | 919 | | 3117 | 3197 | + 7 2502 | 989 |
| 990 | 98·30 | 3 | 83 52 59·1 | +20·052 | −0·006 | +0·073 | | 22659 | 961 | | | | + 6 2543 | 990 |

950. Authority for Proper Motions: Boss. 953, 986, 990. Authority for Proper Motions: Auwers (Mayer's Sternverzeichnis). 975. The Proper Motions have been specially computed for the present catalogue. 977. Authority for Proper Motions: Bossert.

| No. | Constellation. | Magnitude. | Number of Estimations. | Mean Year and Fraction of Year. | Number of Observations. | Mean R.A. | Precess. | Sec. Var. | Proper Motion. | No. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | h. m. s. | s. | s. | s. | |
| 991 | Virginis ... ... ... | 8·5 | 2 | 02·29 | 3 | 11 58 57·85 | +3·0731 | −0·0002 | +0·0040 | 991 |
| 992 | 9 Virginis ... ... *o* | 4·0 | 1 | 97·44 | 17 | 12 0 6·89 | +3·0726 | −0·0030 | −0·0159 | 992 |
| 993 | Virginis ... ... ... | 6·6 | ... | 98·36 | 3 | 12 0 52·52 | +3·0730 | +0·0033 | −0·0032 | 993 |
| 994 | Virginis ... ... ... | 7·5 | 1 | 02·30 | 3 | 12 2 4·19 | +3·0727 | +0·0021 | | 994 |
| 995 | Virginis ... ... ... | 7·3 | 1 | 97·27 | 3 | 12 2 53·31 | +3·0724 | +0·0015 | −0·0021 | 995 |
| 996 | 10 Virginis ... ... ... | 6·2 | 1 | 96·36 | 3 | 12 4 33·79 | +3·0716 | +0·0009 | +0·0008 | 996 |
| 997 | 11 Virginis ... ... ... | 5·7 | ... | 96·31 | 3 | 12 4 57·56 | +3·0695 | −0·0011 | −0·0125 | 997 |
| 998 | 2 Corvi ... ... ... $\epsilon$ | 3·4 | ... | 98·46 | 7 | 12 4 58·76 | +3·0845 | +0·0144 | −0·0059 | 998 |
| 999 | Virginis ... ... ... | 7·3 | 1 | 97·33 | 3 | 12 6 33·28 | +3·0696 | −0·0001 | | 999 |
| 1000 | Virginis ... ... ... | 7·2 | 3 | 97·56 | 4 | 12 8 49·29 | +3·0702 | +0·0009 | | 1000 |
| 1001 | Hydrae ... ... ... | 6·5 | ... | 96·71 | 5 | 12 9 55·23 | +3·1044 | +0·0191 | | 1001 |
| 1002 | Virginis ... ... ... | 8·0 | 1 | 02·29 | 3 | 12 11 51·27 | +3·0716 | +0·0021 | | 1002 |
| 1003 | 13 Virginis ... ... ... | 5·9 | ... | 98·36 | 3 | 12 13 32·63 | +3·0730 | +0·0028 | −0·0001 | 1003 |
| 1004 | Ursae Minoris ... ... | 6·9 | 1 | 00·93 | 5 | 12 14 23·88 | +0·3195 | +0·7796 | −0·0858 | 1004 |
| 1005 | 15 Virginis ... ... $\eta$ | 4·0 | ... | 97·59 | 13 | 12 14 47·33 | +3·0729 | +0·0028 | −0·0056 | 1005 |
| 1006 | 16 Virginis ... ... *c* | 5·3 | 1 | 96·32 | 3 | 12 15 16·19 | +3·0667 | +0·0008 | −0·0213 | 1006 |
| 1007 | 17 Virginis ... ... ... | 6·5 | ... | 98·32 | 3 | 12 17 26·91 | +3·0623 | −0·0002 | −0·0126 | 1007 |
| 1008 | Virginis ... ... ... | 6·7 | 1 | 98·83 | 4 | 12 18 6·79 | +3·0809 | +0·0052 | +0·0005 | 1008 |
| 1009 | Virginis ... ... ... | 7·3 | 1 | 97·29 | 3 | 12 20 54·37 | +3·0672 | +0·0017 | | 1009 |
| 1010 | Virginis ... ... ... | 7·7 | 1 | 02·30 | 3 | 12 21 38·77 | +3·0719 | +0·0029 | | 1010 |
| 1011 | 15 Comae ... ... $\gamma$ | 4·4 | ... | 95·31 | 5 | 12 21 57·22 | +3·0024 | −0·0124 | −0·0081 | 1011 |
| 1012 | Virginis ... ... ... | 6·0 | 1 | 98·66 | 3 | 12 22 43·64 | +3·0821 | +0·0053 | −0·0065 | 1012 |
| 1013 | Virginis ... ... ... | 6·7 | ... | 98·37 | 3 | 12 22 47·39 | +3·0917 | +0·0075 | −0·0178 | 1013 |
| 1014 | Virginis ... ... ... | 6·8 | ... | 97·99 | 3 | 12 23 12·57 | +3·0610 | +0·0007 | −0·0037 | 1014 |
| 1015 | Virginis ... ... ... | 7·1 | ... | 98·33 | 3 | 12 24 23·06 | +3·0593 | +0·0005 | −0·0070 | 1015 |
| 1016 | 7 Corvi ... ... ... $\delta^2$ | 3·0 | ... | 98·84 | 7 | 12 24 41·27 | +3·1138 | +0·0120 | −0·0142 | 1016 |
| 1017 | Virginis ... ... ... | 8·0 | 2 | 01·65 | 3 | 12 26 7·91 | +3·0677 | +0·0024 | | 1017 |
| 1018 | Virginis ... ... ... | 6·1 | ... | 98·30 | 3 | 12 26 16·49 | +3·0508 | −0·0008 | | 1018 |
| 1019 | 21 Virginis ... ... *q* | 5·3 | ... | 00·99 | 3 | 12 28 37·01 | +3·0988 | +0·0082 | −0·0082 | 1019 |
| 1020 | 9 Corvi ... ... ... $\beta$ | 2·7 | ... | 97·94 | 6 | 12 29 7·95 | +3·1441 | +0·0166 | −0·0008 | 1020 |
| 1021 | Virginis ... ... ... | 7·0 | 1 | 97·35 | 3 | 12 30 10·20 | +3·0641 | +0·0022 | −0·0073 | 1021 |
| 1022 | 25 Virginis ... ... *f* | 5·3 | 1 | 98·36 | 3 | 12 31 38·19 | +3·0897 | +0·0064 | −0·0035 | 1022 |
| 1023 | Hydrae ... ... ... | 5·4 | ... | 95·31 | 4 | 12 32 24·00 | +3·1670 | +0·0194 | +0·0030 | 1023 |
| 1024 | Virginis ... ... ... | 6·9 | ... | 97·67 | 3 | 12 32 46·21 | +3·0566 | +0·0013 | | 1024 |
| 1025 | Virginis ... ... ... | 6·2 | ... | 96·34 | 3 | 12 32 58·53 | +3·0599 | +0·0018 | | 1025 |
| 1026 | Virginis ... ... ... | 5·9 | ... | 97·33 | 3 | 12 33 16·35 | +3·0646 | +0·0025 | | 1026 |
| 1027 | Virginis ... ... R | Var. | 6 | 00·96 | 3 | 12 33 25·46 | +3·0470 | −0·0001 | | 1027 |
| 1028 | Comae ... ... ... | 8·3* | ... | 00·98 | 3 | 12 34 22·63 | +2·9977 | −0·0067 | | 1028 |
| 1029 | Draconis ... ... ... | 8·5 | 1 | 96·98 | 6 | 12 36 1·99 | +2·5173 | −0·0458 | −0·0854 | 1029 |
| 1030 | 30 Virginis ... ... $\rho$ | 4·9 | ... | 00·30 | 11 | 12 36 49·35 | +3·0320 | −0·0015 | +0·0033 | 1030 |
| 1031 | 31 Virginis ... ... $d^1$ | 5·5 | ... | 98·31 | 3 | 12 36 53·01 | +3·0451 | +0·0002 | −0·0071 | 1031 |
| 1032 | Virginis ... ... ... | 8·2 | 2 | 02·32 | 3 | 12 36 56·67 | +3·0688 | +0·0034 | | 1032 |
| 1033 | 27 Comae ... ... ... | 5·3 | ... | 96·15 | 6 | 12 41 39·02 | +2·9983 | −0·0044 | −0·0009 | 1033 |
| 1034 | Virginis ... ... ... | 6·4 | ... | 97·99 | 3 | 12 41 57·52 | +3·0450 | +0·0010 | | 1034 |
| 1035 | Virginis ... ... ... | 6·3 | ... | 98·36 | 3 | 12 42 23·21 | +3·0975 | +0·0073 | −0·0014 | 1035 |

991. A star (Albany 4408), magnitude 8·0, precedes several seconds. 992. Light orange. 1017. A star (Albany 4505), magnitude 8·7, precedes 3ˢ and is slightly north. 1018, 1022, 1035. The magnitude of each of these stars in W. B. (1) is 9. 1027. 1897 April 14, mag. 8·3; 1897 May 1, mag. 7·9; 1898 April 29, mag. 9·3; 1902 April 18, mag. 9·5; 1902 April 28, mag. about 10; 1903 April 22, mag. 6·5. The limits are 6·5 and 11·0; the period is 145 days.

| No. | Mean Year and Fraction of Year. | Number of Observations. | Mean N.P.D. | Precess. | Sec. Var. | Proper Motion. | Auwers' Bradley, 1755. | Lalande, 1800. | Weisse's Bessel (1), 1825. | Albany (A. G.), 1875. | Radcliffe, 1890. | Greenwich, 1890. | B.D. | No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ° ′ ″ | ″ | ″ | ″ | | | | | | | ° | |
| 991 | 02·29 | 3 | 86 5 11·3 | +20·052 | −0·007 | +0·550 | | 22667 | 966 | 4409 | | | + 4 2568 | 991 |
| 992 | 95·81 | 6 | 80 42 41·4 | +20·052 | −0·009 | −0·049 | 1623 | | 991 | | 3130 | 3205 | + 9 2583 | 992 |
| 993 | 98·36 | 3 | 92 34 26·7 | +20·052 | −0·010 | +0·005 | | 22715 | 999 | | 3133 | 3209 | − 2 3460 | 993 |
| 994 | 02·30 | 3 | 90 4 23·3 | +20·051 | −0·013 | | | 22742 | 1011 | | 3137 | | + 0 2894 | 994 |
| 995 | 97·27 | 3 | 88 49 17·7 | +20·051 | −0·014 | +0·059 | | 22761 | 1026 | 4431 | | | + 1 2656 | 995 |
| 996 | 96·36 | 3 | 87 32 26·7 | +20·048 | −0·018 | +0·187 | 1625 | 22807 | 14 | 4440 | | 3215 | + 2 2517 | 996 |
| 997 | 96·31 | 3 | 83 38 13·1 | +20·047 | −0·018 | −0·039 | 1627 | 22818 | 19 | | | 3217 | + 6 2559 | 997 |
| 998 | 98·30 | 3 | 112 3 48·2 | +20·047 | −0·018 | −0·021 | 1626 | 22817 | | | 3152 | 3218 | −21 3487 | 998 |
| 999 | 97·33 | 3 | 85 23 15·9 | +20·044 | −0·021 | | | | 51 | 4445 | | 3225 | + 4 2583 | 999 |
| 1000 | 97·56 | 4 | 87 10 59·1 | +20·037 | −0·026 | | | 22927 | 87 | 4451 | | | + 3 2616 | 1000 |
| 1001 | 99·98 | 3 | 118 40 49·5 | +20·033 | −0·028 | | | | | | 3173 | | | 1001 |
| 1002 | 02·29 | 3 | 89 5 31·2 | +20·025 | −0·032 | | | 23005 | 138 | 4456 | | | + 1 2676 | 1002 |
| 1003 | 98·36 | 3 | 90 13 51·7 | +20·017 | −0·035 | +0·029 | 1643 | 23052 | 167 | | 3195 | 3248 | + 0 2920 | 1003 |
| 1004 | 02·66 | 3 | 1 44 45·1 | +20·013 | −0·012 | −0·076 | 1672 | | | | | 3252 | +88 71 | 1004 |
| 1005 | 97·07 | 8 | 90 6 39·5 | +20·010 | −0·037 | +0·022 | 1647 | 23088 | 191 | | 3199 | 3251 | + 0 2926 | 1005 |
| 1006 | 96·32 | 3 | 86 7 50·3 | +20·008 | −0·038 | +0·063 | 1652 | 23113 | 207 | 4465 | | 3256 | + 4 2604 | 1006 |
| 1007 | 98·32 | 3 | 84 8 17·3 | +19·994 | −0·043 | +0·054 | 1657 | 23167 | 241 | | | | + 6 2599 | 1007 |
| 1008 | 98·67 | 3 | 94 25 8·6 | +19·989 | −0·044 | +0·036 | | 23184 | | | 3209 | 3271 | − 4 3268 | 1008 |
| 1009 | 97·29 | 3 | 87 24 15·0 | +19·969 | −0·049 | | | 23252 | 295 | 4485 | | | + 2 2539 | 1009 |
| 1010 | 02·30 | 3 | 89 37 46·4 | +19·963 | −0·051 | | | 23271 | 306 | | | | + 0 2944 | 1010 |
| 1011 | 95·31 | 5 | 61 10 32·3 | +19·960 | −0·051 | +0·086 | 1666 | 23279 | | | 3230 | 3285 | +29 2288 | 1011 |
| 1012 | 98·66 | 3 | 94 3 42·7 | +19·954 | −0·053 | +0·017 | | 23307 | 331 | | 3236 | 3287 | − 3 3298 | 1012 |
| 1013 | 98·37 | 3 | 98 7 23·3 | +19·953 | −0·053 | 0·000 | | 23312 | 334 | | 3238 | | − 7 3409 | 1013 |
| 1014 | 97·99 | 3 | 85 2 58·1 | +19·949 | −0·054 | −0·019 | | | 344 | | | | + 5 2631 | 1014 |
| 1015 | 98·33 | 3 | 84 36 34·3 | +19·939 | −0·056 | −0·050 | | 23352 | 365 | | | | + 5 2633 | 1015 |
| 1016 | 98·66 | 3 | 105 57 30·8 | +19·936 | −0·057 | +0·146 | 1675 | 23359 | | | 3242 | 3291 | −15 3482 | 1016 |
| 1017 | 02·30 | 3 | 88 7 13·0 | +19·922 | −0·060 | | | 23395 | 392 | 4507 | | | + 2 2552 | 1017 |
| 1018 | 98·30 | 3 | 81 50 36·2 | +19·921 | −0·059 | | | 23410 | 398 | | | | + 8 2609 | 1018 |
| 1019 | 00·99 | 3 | 98 54 1·4 | +19·896 | −0·065 | −0·008 | 1683 | 23471 | 437 | | 3259 | 3310 | − 8 3372 | 1019 |
| 1020 | 98·31 | 3 | 112 50 37·5 | +19·890 | −0·067 | +0·054 | 1685 | 23489 | | | 3263 | 3313 | −22 3401 | 1020 |
| 1021 | 97·35 | 3 | 87 11 21·3 | +19·879 | −0·067 | −0·057 | | 23525 | 463 | 4518 | | | + 3 2670 | 1021 |
| 1022 | 98·36 | 3 | 95 16 49·9 | +19·861 | −0·071 | +0·019 | 1690 | 23576 | 485 | | 3275 | 3321 | − 5 3535 | 1022 |
| 1023 | 95·30 | 3 | 116 35 10·0 | +19·852 | −0·074 | +0·100 | | 23593 | | | 3279 | | | 1023 |
| 1024 | 97·67 | 3 | 85 9 36·8 | +19·847 | −0·072 | | | 23605 | 502 | 4524 | | | + 5 2654 | 1024 |
| 1025 | 96·34 | 3 | 86 10 1·0 | +19·845 | −0·073 | | | 23608 | 503 | 4525 | | | + 4 2631 | 1025 |
| 1026 | 97·33 | 3 | 87 35 41·2 | +19·841 | −0·073 | | | 23616 | 513 | 4529 | | 3322 | + 2 2560 | 1026 |
| 1027 | 00·96 | 3 | 82 27 41·1 | +19·839 | −0·073 | | | | | | | | + 7 2561 | 1027 |
| 1028 | 00·98 | 3 | 69 25 10·7 | +19·827 | −0·074 | | | | | | | | +20 2748 | 1028 |
| 1029 | 96·98 | 6 | 20 38 57·3 | +19·805 | −0·066 | −0·042 | | | | | | | +69 671 | 1029 |
| 1030 | 01·13 | 5 | 79 12 47·2 | +19·794 | −0·079 | +0·088 | 1701 | | 575 | | 3299 | 3347 | +11 2485 | 1030 |
| 1031 | 98·31 | 3 | 82 38 39·7 | +19·793 | −0·080 | −0·006 | 1702 | 23697 | | | | | + 7 2568 | 1031 |
| 1032 | 02·32 | 3 | 88 57 21·0 | +19·792 | −0·080 | | | 23700 | | 4540 | | | + 1 2739 | 1032 |
| 1033 | 97·62 | 3 | 72 52 34·2 | +19·722 | −0·087 | −0·038 | | 23818 | | | 3322 | | +17 2533 | 1033 |
| 1034 | 97·99 | 3 | 83 30 6·0 | +19·717 | −0·089 | | | 23824 | 669 | | | | + 6 2660 | 1034 |
| 1035 | 98·36 | 3 | 95 45 14·9 | +19·710 | −0·092 | +0·033 | | 23839 | 678 | | 3325 | 3361 | − 5 3569 | 1035 |

991, 1013. Authority for Proper Motions: Porter. 993, 1035. Authority for Proper Motions: Auwers (Astronomische Nachrichten, 3511). 995, 1021. Authority for Proper Motions: Boss. 1008, 1012, 1014. Authority for Proper Motions: Auwers (Mayer's Sternverzeichnis). 1015. The Proper Motions have been specially computed for the present catalogue. 1020. Authority for Proper Motions: Auwers (Astronomische Nachrichten, 3929). 1023. Authority for Proper Motions: Radcliffe, 1890, 3279. 1029. Authority for Proper Motions: Schroeter. 1033. Authority for Proper Motions: Auwers (Berlin A).

| No. | Constellation. | Magnitude. | Number of Estimations. | Mean Year and Fraction of Year. | Number of Observations. | Mean R.A. | Precess. | Sec. Var. | Proper Motion. | No. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | h. m. s. | s. | s. | s. | |
| 1036 | 35 Virginis ... ... ... | 6·9 | 3 | 97·87 | 14 | 12 42 45·85 | +3·0549 | +0·0022 | −0·0030 | 1036 |
| 1037 | Virginis ... ... ... | 8·0 | 1 | 02·31 | 3 | 12 42 59·53 | +3·0719 | +0·0042 | | 1037 |
| 1038 | Virginis ... ... ... | 8·2* | ... | 02·34 | 3 | 12 44 38·69 | +3·0648 | +0·0035 | −0·0050 | 1038 |
| 1039 | Virginis ... ... U | Var. | 6 | 02·01 | 3 | 12 46 1·27 | +3·0442 | +0·0014 | | 1039 |
| 1040 | 37 Virginis ... ... ... | 6·8 | 2 | 97·35 | 3 | 12 46 31·36 | +3·0558 | +0·0027 | −0·0036 | 1040 |
| 1041 | Hydrae ... ... ... | 6·1 | ... | 95·31 | 5 | 12 46 37·17 | +3·2056 | +0·0201 | | 1041 |
| 1042 | 31 Comae ... ... ... | 5·1 | ... | 00·04 | 7 | 12 46 49·65 | +2·9280 | −0·0096 | −0·0027 | 1042 |
| 1043 | Virginis ... ... ... | 7·6 | 2 | 97·36 | 3 | 12 50 5·55 | +3·0545 | +0·0028 | | 1043 |
| 1044 | Virginis ... ... ... | 7·3 | 1 | 97·66 | 3 | 12 50 31·39 | +3·0697 | +0·0044 | | 1044 |
| 1045 | 43 Virginis ... ... δ | 3·5 | 1 | 98·99 | 14 | 12 50 33·92 | +3·0526 | +0·0027 | −0·0336 | 1045 |
| 1046 | Virginis ... ... ... | 7·3 | 1 | 98·32 | 3 | 12 52 20·74 | +3·0623 | +0·0038 | | 1046 |
| 1047 | Virginis ... ... ... | 7·4 | 2 | 99·59 | 4 | 12 54 16·77 | +3·0339 | +0·0014 | | 1047 |
| 1048 | Virginis ... ... ... | 7·4 | 2 | 98·37 | 3 | 12 55 25·32 | +3·0495 | +0·0029 | | 1048 |
| 1049 | Virginis ... ... ... | 7·1 | ... | 97·34 | 3 | 12 56 3·65 | +3·0450 | +0·0025 | | 1049 |
| 1050 | Hydrae ... ... ... | 7·0 | ... | 96·70 | 3 | 12 56 13·52 | +3·2181 | +0·0191 | | 1050 |
| 1051 | 47 Virginis ... ... ε | 2·8 | ... | 98·56 | 22 | 12 57 11·91 | +3·0056 | −0·0006 | −0·0192 | 1051 |
| 1052 | Virginis ... ... ... | Var. | 4 | 98·68 | 3 | 12 57 33·64 | +3·0394 | +0·0022 | | 1052 |
| 1053 | Virginis ... ... ... | 7·2 | ... | 98·00 | 3 | 12 59 38·11 | +3·0677 | +0·0047 | 0·0000 | 1053 |
| 1054 | Virginis ... ... ... | 8·0 | 3 | 02·32 | 3 | 13 2 13·46 | +3·0657 | +0·0047 | −0·0067 | 1054 |
| 1055 | Virginis ... ... ... | 8·4 | 3 | 02·32 | 3 | 13 2 13·49 | +3·0657 | +0·0047 | −0·0067 | 1055 |
| 1056 | Virginis ... ... ... | 7·7* | ... | 02·67 | 3 | 13 2 30·16 | +3·0601 | +0·0043 | | 1056 |
| 1057 | Virginis ... ... ... | 6·5 | 1 | 98·34 | 3 | 13 3 46·71 | +3·0357 | +0·0025 | +0·0040 | 1057 |
| 1058 | Virginis ... ... ... | 7·5 | 2 | 03·07 | 4 | 13 4 2·60 | +3·0490 | +0·0035 | | 1058 |
| 1059 | 51 Virginis ... ... θ | 4·0 | 1 | 98·25 | 21 | 13 4 46·24 | +3·1054 | +0·0079 | −0·0043 | 1059 |
| 1060 | Virginis ... ... ... | 7·5 | 1 | 97·33 | 3 | 13 7 35·84 | +3·0415 | +0·0033 | | 1060 |
| 1061 | Virginis ... ... ... | 6·6 | 2 | 98·35 | 3 | 13 8 51·77 | +3·0590 | +0·0046 | −0·0046 | 1061 |
| 1062 | Virginis ... ... ... | 7·5 | ... | 98·71 | 3 | 13 9 59·31 | +3·0372 | +0·0032 | | 1062 |
| 1063 | Virginis ... ... ... | 7·7 | 1 | 02·32 | 3 | 13 10 27·65 | +3·0474 | +0·0039 | | 1063 |
| 1064 | Virginis ... ... ... | 7·2 | ... | 98·72 | 3 | 13 11 21·72 | +3·0222 | +0·0023 | | 1064 |
| 1065 | Virginis ... ... ... | 7·4 | ... | 00·41 | 3 | 13 11 45·76 | +3·0600 | +0·0049 | | 1065 |
| 1066 | Virginis ... ... ... | 6·8 | 1 | 02·67 | 3 | 13 12 22·58 | +3·0738 | +0·0058 | | 1066 |
| 1067 | 60 Virginis ... ... σ | 5·0 | ... | 02·38 | 3 | 13 12 33·23 | +3·0290 | +0·0029 | −0·0034 | 1067 |
| 1068 | Virginis ... ... ... | 7·0 | 1 | 98·72 | 3 | 13 13 47·14 | +3·0416 | +0·0038 | | 1068 |
| 1069 | Virginis ... ... ... | 6·7 | 1 | 98·37 | 3 | 13 15 10·01 | +3·0440 | +0·0040 | | 1069 |
| 1070 | Virginis ... ... ... | 6·9 | ... | 01·00 | 3 | 13 15 30·68 | +3·0322 | +0·0033 | −0·0030 | 1070 |
| 1071 | Virginis ... ... ... | 7·0 | 1 | 00·99 | 3 | 13 15 37·05 | +3·0465 | +0·0042 | | 1071 |
| 1072 | Virginis ... ... ... | 5·6 | ... | 98·71 | 3 | 13 16 36·50 | +3·0527 | +0·0047 | | 1072 |
| 1073 | 64 Virginis ... ... ... | 5·9 | ... | 01·38 | 3 | 13 17 7·13 | +3·0288 | +0·0032 | −0·0063 | 1073 |
| 1074 | Virginis ... ... ... | 7·5 | 1 | 00·38 | 3 | 13 18 34·08 | +3·0474 | +0·0045 | +0·0015 | 1074 |
| 1075 | Virginis ... ... ... | 7·7 | 1 | 02·98 | 3 | 13 18 35·76 | +3·0473 | +0·0045 | 0·0000 | 1075 |
| 1076 | Virginis ... ... ... | 7·1 | ... | 00·72 | 3 | 13 19 12·55 | +3·0575 | +0·0051 | | 1076 |
| 1077 | Virginis ... ... ... | 7·7* | ... | 02·67 | 3 | 13 19 39·02 | +3·0335 | +0·0037 | | 1077 |
| 1078 | 67 Virginis ... ... α | 1·2 | ... | 99·07 | 17 | 13 19 55·36 | +3·1585 | +0·0116 | −0·0044 | 1078 |
| 1079 | Virginis ... ... ... | 7·7 | 1 | 98·38 | 3 | 13 24 6·59 | +3·0674 | +0·0059 | | 1079 |
| 1080 | Virginis ... ... ... | 6·7 | ... | 98·72 | 3 | 13 24 41·33 | +3·0591 | +0·0055 | −0·0036 | 1080 |

1039. 1897 May 18, Below 10 mag.; 1898 April 29, mag. 9·3; 1899 May 29, mag. about 8; 1902 April 28, mag. about 10; 1903 April 22, mag. 7·5; 1903 April 23, mag. 7·7. Chandler's limits are 7·7 and 12·8; the period is 207 days.
1052. 1896 May 27, Red, mag. 8; 1897 May 1, mag. 8·4; 1898 May 12, mag. 7·3; 1902 April 28, orange-red, mag. 8·1. Pickering's limits are 8·8 and 9·7 (Astronomische Nachrichten, 3347).
1059. Companion, magnitude 9·3, precedes north.
1076. Close double. Observed as one mass.

| No. | Mean Year and Fraction of Year. | Number of Observations. | Mean N.P.D. | Precess. | Sec. Var. | Proper Motion. | Auwers' Bradley, 1755. | Lalande, 1800. | Weisse's Bessel (1), 1825. | Albany (A.G.), 1875. | Radcliffe, 1890. | Greenwich, 1890. | B.D. | No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ° ′ ″ | ″ | ″ | ″ | | | | | | | ° | |
| 1036 | 96·89 | 7 | 85 52 52·2 | +19·704 | −0·091 | +0·006 | 1708 | 23854 | 682 | 4570 | 3327 | 3362 | + 4 2653 | 1036 |
| 1037 | 02·31 | 3 | 89 48 47·2 | +19·700 | −0·092 | | | 23859 | 688 | | | | + 0 2983 | 1037 |
| 1038 | 02·34 | 3 | 88 14 56·0 | +19·673 | −0·095 | +0·660 | | 23917 | | 4578 | | | + 2 2585 | 1038 |
| 1039 | 02·01 | 3 | 83 54 8·5 | +19·649 | −0·097 | | | | 747 | | | | + 6 2664 | 1039 |
| 1040 | 97·35 | 3 | 86 23 58·7 | +19·640 | −0·098 | −0·030 | 1714 | 23964 | 754 | 4586 | | 3368 | + 3 2703 | 1040 |
| 1041 | 97·64 | 3 | 116 11 41·5 | +19·639 | −0·103 | | | | | | 3343 | 3369 | | 1041 |
| 1042 | 02·30 | 3 | 61 54 54·5 | +19·635 | −0·095 | +0·018 | 1715 | 23973 | | | 3344 | 3370 | +28 2156 | 1042 |
| 1043 | 97·36 | 4 | 86 24 34·0 | +19·575 | −0·105 | | | 24058 | | 4605 | | | + 3 2714 | 1043 |
| 1044 | 97·66 | 3 | 89 24 9·7 | +19·567 | −0·106 | | | 24072 | 818 | 4606 | | | + 0 3002 | 1044 |
| 1045 | 96·68 | 3 | 86 3 32·5 | +19·566 | −0·106 | +0·047 | 1723 | 24078 | 827 | 4608 | 3360 | 3378 | + 4 2669 | 1045 |
| 1046 | 98·32 | 3 | 88 1 49·4 | +19·531 | −0·110 | | | 24126 | 854 | 4609 | | | + 2 2604 | 1046 |
| 1047 | 98·36 | 3 | 82 57 12·7 | +19·492 | −0·112 | | | 24184 | 887 | | | | + 7 2600 | 1047 |
| 1048 | 98·37 | 3 | 85 51 25·9 | +19·469 | −0·115 | | | 24209 | 910 | 4619 | | | + 4 2683 | 1048 |
| 1049 | 97·34 | 3 | 85 6 8·7 | +19·455 | −0·116 | | | | 919 | 4622 | | | + 5 2702 | 1049 |
| 1050 | 96·70 | 3 | 114 7 37·6 | +19·452 | −0·122 | | | 24225 | | | 3389 | | | 1050 |
| 1051 | 96·35 | 3 | 78 30 11·7 | +19·431 | −0·117 | −0·029 | 1735 | 24250 | 940 | | 3392 | 3399 | +11 2529 | 1051 |
| 1052 | 98·68 | 3 | 84 16 33·1 | +19·423 | −0·119 | | | | 948 | | | | + 5 2708 | 1052 |
| 1053 | 98·00 | 3 | 89 9 55·2 | +19·377 | −0·124 | +0·113 | | 24309 | 985 | 4638 | | | + 1 2786 | 1053 |
| 1054 | 02·32 | 3 | 88 52 39·2 | +19·318 | −0·128 | +0·109 | | | 1028 | 4644 | | | + 1 2789 | 1054 |
| 1055 | 02·32 | 3 | 88 52 31·7 | +19·317 | −0·128 | +0·109 | | | 1027 | 4645 | | | + 1 2789 | 1055 |
| 1056 | 02·67 | 3 | 87 59 25·0 | +19·311 | −0·129 | | | 24373 | | 4648 | | | + 2 2626 | 1056 |
| 1057 | 98·34 | 3 | 84 14 24·9 | +19·281 | −0·130 | +0·720 | | 24414 | 1063 | | | | + 6 2697 | 1057 |
| 1058 | 03·07 | 4 | 86 19 19·6 | +19·274 | −0·131 | | | 24424 | 6 | 4657 | | | + 3 2739 | 1058 |
| 1059 | 99·00 | 3 | 95 0 18·2 | +19·257 | −0·135 | +0·037 | 1747 | 24448 | 17 | | 3424 | 3420 | − 4 3430 | 1059 |
| 1060 | 97·33 | 3 | 85 24 2·2 | +19·186 | −0·137 | | | 24523 | 68 | 4665 | | | + 4 2703 | 1060 |
| 1061 | 99·59 | 4 | 88 0 42·8 | +19·154 | −0·140 | +0·030 | | 24563 | 93 | 4668 | | | + 2 2646 | 1061 |
| 1062 | 98·71 | 3 | 84 57 10·3 | +19·124 | −0·141 | | | 24592 | 109 | | | | + 5 2728 | 1062 |
| 1063 | 02·32 | 3 | 86 25 15·7 | +19·112 | −0·143 | | | 24603 | 119 | 4672 | | | + 3 2748 | 1063 |
| 1064 | 98·72 | 3 | 82 57 55·8 | +19·088 | −0·143 | | | 24626 | 136 | | | | + 7 2627 | 1064 |
| 1065 | 00·41 | 3 | 88 13 54·3 | +19·077 | −0·146 | | | 24637 | 144 | 4676 | | | + 2 2653 | 1065 |
| 1066 | 02·67 | 3 | 90 8 54·0 | +19·060 | −0·147 | | | 24660 | 159 | | 3457 | | + 0 3040 | 1066 |
| 1067 | 02·38 | 3 | 84 0 11·3 | +19·056 | −0·146 | −0·023 | 1762 | 24666 | 162 | | | 3445 | + 6 2722 | 1067 |
| 1068 | 98·72 | 3 | 85 47 8·1 | +19·022 | −0·149 | | | 24703 | | 4686 | | | + 4 2721 | 1068 |
| 1069 | 98·37 | 3 | 86 11 12·7 | +18·983 | −0·151 | | | 24738 | 207 | 4697 | | | + 4 2728 | 1069 |
| 1070 | 01·00 | 3 | 84 38 51·8 | +18·973 | −0·151 | +0·020 | 1768 | 24743 | 210 | | | | + 5 2736 | 1070 |
| 1071 | 00·99 | 3 | 86 31 57·5 | +18·971 | −0·152 | | | 24747 | 212 | 4698 | | | + 3 2758 | 1071 |
| 1072 | 98·71 | 3 | 87 23 13·9 | +18·942 | −0·154 | | | | 229 | 4703 | | | + 2 2664 | 1072 |
| 1073 | 01·38 | 3 | 84 19 14·3 | +18·928 | −0·154 | +0·030 | 1770 | 24783 | 240 | | | | + 5 2737 | 1073 |
| 1074 | 00·38 | 3 | 86 45 34·6 | +18·885 | −0·158 | −0·216 | | 24818 | 257 | 4708 | | | + 3 2765 | 1074 |
| 1075 | 02·98 | 3 | 86 45 28·2 | +18·884 | −0·158 | −0·254 | | 24821 | 259 | 4709 | | | + 3 2766 | 1075 |
| 1076 | 00·72 | 3 | 88 4 40·7 | +18·866 | −0·159 | | | | 267 | 4712 | | | + 2 2671 | 1076 |
| 1077 | 02·67 | 3 | 85 4 36·1 | +18·853 | −0·159 | | | | | 4713 | | | + 5 2742 | 1077 |
| 1078 | 02·34 | 3 | 100 38 21·8 | +18·845 | −0·165 | +0·018 | 1774 | 24845 | 277 | | 3479 | 3465 | −10 3672 | 1078 |
| 1079 | 98·38 | 3 | 89 21 47·5 | +18·717 | −0·169 | | | 24940 | | 4728 | | | + 0 3065 | 1079 |
| 1080 | 98·72 | 3 | 88 23 5·8 | +18·699 | −0·169 | +0·148 | | 24963 | | 4734 | | | + 1 2819 | 1080 |

1038. The Proper Motions have been specially computed for the present catalogue. 1053. Authority for Proper Motions: Bossert. 1054, 1055, 1057, 1074, 1075. Authority for Proper Motions: Porter. 1061. Authority for Proper Motions: Auwers (Mayer's Sternverzeichnis). 1080. The Proper Motion adopted is the mean of Boss and Bossert.

| No. | Constellation. | Magnitude. | Number of Estimations. | Mean Year and Fraction of Year. | Number of Observations. | Mean R.A. | Precess. | Sec. Var. | Proper Motion. | No. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | h. m. s. | s. | s. | s. | |
| 1081 | Virginis ... ... ... | 6·4 | ... | 99·41 | 3 | 13 24 55·83 | +3·0173 | +0·0032 | | 1081 |
| 1082 | Virginis ... ... ... | 6·3 | ... | 00·15 | 4 | 13 24 59·14 | +3·0073 | +0·0027 | | 1082 |
| 1083 | Virginis ... ... ... | 6·8 | ... | 99·41 | 3 | 13 28 7·10 | +3·0168 | +0·0035 | | 1083 |
| 1084 | 78 Virginis ... ... ... | 5·0 | ... | 98·36 | 3 | 13 29 3·77 | +3·0358 | +0·0045 | +0·0014 | 1084 |
| 1085 | 79 Virginis ... ... $\zeta$ | 3·4 | ... | 99·18 | 16 | 13 29 35·78 | +3·0735 | +0·0065 | −0·0205 | 1085 |
| 1086 | Virginis ... ... ... | 6·7 | ... | 99·41 | 3 | 13 32 39·20 | +3·0462 | +0·0052 | | 1086 |
| 1087 | 82 Virginis ... ... $m$ | 5·2 | ... | 98·85 | 19 | 13 36 21·68 | +3·1513 | +0·0108 | −0·0085 | 1087 |
| 1088 | Boötis ... ... ... ... | 6·5 | 1 | 99·58 | 4 | 13 37 16·48 | +2·9865 | +0·0028 | −0·0243 | 1088 |
| 1089 | 84 Virginis ... ... $o$ | 6·5 | 1 | 97·32 | 3 | 13 38 2·03 | +3·0335 | +0·0049 | −0·0223 | 1089 |
| 1090 | Virginis ... ... ... | 6·4 | ... | 98·74 | 3 | 13 38 41·93 | +3·1215 | +0·0093 | −0·0038 | 1090 |
| 1091 | Virginis ... ... ... | 8·0 | 1 | 02·33 | 3 | 13 39 20·70 | +3·0609 | +0·0063 | | 1091 |
| 1092 | 1 Centauri ... ... $i$ | 4·4 | ... | 95·41 | 4 | 13 40 0·10 | +3·4331 | +0·0281 | −0·0374 | 1092 |
| 1093 | Virginis ... ... ... | 7·2 | ... | 99·41 | 3 | 13 41 5·56 | +3·0166 | +0·0044 | | 1093 |
| 1094 | Virginis ... ... ... | 6·3 | ... | 98·02 | 3 | 13 41 59·96 | +3·0036 | +0·0039 | −0·0321 | 1094 |
| 1095 | 4 Boötis ... ... ... $\tau$ | 4·5 | ... | 99·54 | 21 | 13 42 30·57 | +2·8854 | −0·0006 | −0·0346 | 1095 |
| 1096 | Virginis ... ... ... | 8·0 | 1 | 02·41 | 3 | 13 44 16·79 | +3·0209 | +0·0048 | | 1096 |
| 1097 | Virginis ... ... ... | 6·8 | ... | 98·03 | 3 | 13 44 29·11 | +3·0021 | +0·0040 | | 1097 |
| 1098 | Virginis ... ... ... | 6·3 | 1 | 98·41 | 3 | 13 45 23·33 | +3·0104 | +0·0044 | | 1098 |
| 1099 | Draconis ... ... ... | 7·7 | ... | 97·35 | 3 | 13 46 49·08 | +1·9882 | −0·0066 | | 1099 |
| 1100 | Virginis ... ... ... | 7·7* | ... | 02·34 | 3 | 13 47 32·17 | +3·0588 | +0·0065 | | 1100 |
| 1101 | 8 Boötis ... ... ... $\eta$ | 2·8 | ... | 99·52 | 20 | 13 49 55·32 | +2·8615 | −0·0005 | −0·0049 | 1101 |
| 1102 | 92 Virginis ... ... ... | 6·3 | 3 | 97·66 | 3 | 13 51 22·08 | +3·0560 | +0·0066 | −0·0040 | 1102 |
| 1103 | Virginis ... ... ... | 7·4 | 1 | 02·34 | 3 | 13 51 36·87 | +3·0347 | +0·0057 | | 1103 |
| 1104 | Virginis ... ... ... | 7·5 | 1 | 98·03 | 3 | 13 54 37·50 | +3·0667 | +0·0071 | | 1104 |
| 1105 | Virginis ... ... ... | 7·1 | 2 | 97·35 | 3 | 13 56 32·56 | +3·0188 | +0·0054 | | 1105 |
| 1106 | 93 Virginis ... ... $\tau$ | 4·4 | ... | 00·06 | 21 | 13 56 33·33 | +3·0497 | +0·0065 | −0·0005 | 1106 |
| 1107 | Virginis ... ... ... | 7·8* | ... | 98·42 | 3 | 13 57 45·90 | +3·0264 | +0·0057 | −0·0135 | 1107 |
| 1108 | Boötis ... ... ... ... | 6·4 | ... | 99·09 | 3 | 13 58 38·85 | +2·9794 | +0·0041 | | 1108 |
| 1109 | Virginis ... ... ... | 6·3 | ... | 99·42 | 3 | 13 58 54·52 | +3·0103 | +0·0052 | | 1109 |
| 1110 | Virginis ... ... ... | 6·4 | ... | 99·07 | 3 | 13 59 33·29 | +3·0404 | +0·0063 | | 1110 |
| 1111 | 94 Virginis ... ... ... | 6·6 | ... | 98·92 | 12 | 14 0 59·94 | +3·1723 | +0·0116 | −0·0032 | 1111 |
| 1112 | Boötis ... ... ... ... | 7·4 | ... | 99·07 | 3 | 14 1 26·15 | +2·9840 | +0·0044 | | 1112 |
| 1113 | Virginis ... ... ... | 8·1 | ... | 98·39 | 3 | 14 2 32·60 | +3·0693 | +0·0075 | | 1113 |
| 1114 | Virginis ... ... ... | 7·4 | ... | 99·41 | 3 | 14 2 42·96 | +3·0677 | +0·0074 | | 1114 |
| 1115 | Virginis ... ... ... | 7·0 | 1 | 01·70 | 3 | 14 4 24·73 | +3·0332 | +0·0062 | | 1115 |
| 1116 | Virginis ... ... ... | 7·3 | 2 | 97·34 | 3 | 14 5 41·97 | +3·0572 | +0·0071 | | 1116 |
| 1117 | Virginis ... ... ... | 6·3 | ... | 98·66 | 4 | 14 6 26·65 | +3·0503 | +0·0069 | | 1117 |
| 1118 | Virginis ... ... ... | 5·8 | 2 | 98·06 | 3 | 14 7 12·00 | +3·0373 | +0·0065 | | 1118 |
| 1119 | 98 Virginis ... ... $\kappa$ | 4·4 | ... | 97·77 | 12 | 14 7 33·56 | +3·1948 | +0·0124 | −0·0004 | 1119 |
| 1120 | Virginis ... ... ... | 6·8 | 1 | 98·38 | 3 | 14 9 50·51 | +3·0250 | +0·0062 | | 1120 |
| 1121 | 16 Boötis ... ... ... $\alpha$ | 0·3 | ... | 99·53 | 8 | 14 11 5·94 | +2·8136 | +0·0005 | −0·0799 | 1121 |
| 1122 | Virginis ... ... ... | 7·6 | 1 | 99·40 | 3 | 14 11 21·08 | +2·9896 | +0·0051 | | 1122 |
| 1123 | Virginis ... ... ... | 8·2 | 2 | 97·34 | 3 | 14 12 41·33 | +3·0191 | +0·0061 | | 1123 |
| 1124 | Virginis ... ... ... | 7·3 | 2 | 97·71 | 3 | 14 13 27·57 | +3·0196 | +0·0062 | | 1124 |
| 1125 | Virginis ... ... ... | 6·2 | ... | 98·42 | 3 | 14 14 34·62 | +3·0618 | +0·0075 | | 1125 |

1089. Orange. Companion, magnitude 9·1, precedes south. The Declination of this star in W.B. (1) appears to be 10° too great.
1118. Harvard magnitude, 4·9; B.D., 4·8. 1120. W.B. magnitude, 9.

| No. | Mean Year and Fraction of Year. | Number of Observations. | Mean N.P.D. | Precess. | Sec. Var. | Proper Motion. | Auwers' Bradley, 1755. | Lalande, 1800. | Weisse's Bessel (1), 1825. | Albany (A. G.), 1875. | Radcliffe, 1890. | Greenwich, 1890. | B.D. | No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ° ′ ″ | ″ | ″ | ″ | | | | | | | ° | |
| 1081 | 99·41 | 3 | 83 28 16·0 | +18·691 | −0·167 | | | 24967 | 364 | | | | + 6 2750 | 1081 |
| 1082 | 99·10 | 3 | 82 18 15·9 | +18·689 | −0·167 | | | 24972 | 365 | | | | + 7 2655 | 1082 |
| 1083 | 99·41 | 3 | 83 38 0·9 | +18·588 | −0·173 | | | 25050 | 428 | | | | + 6 2756 | 1083 |
| 1084 | 98·36 | 3 | 85 49 38·2 | +18·557 | −0·176 | +0·015 | 1788 | 25082 | 446 | 4753 | | | + 4 2764 | 1084 |
| 1085 | 02·37 | 3 | 90 5 4·4 | +18·539 | −0·179 | −0·056 | 1789 | 25101 | 457 | | 3523 | 3499 | + 0 3076 | 1085 |
| 1086 | 99·41 | 3 | 87 6 27·6 | +18·436 | −0·183 | | | 25177 | 515 | 4760 | | | + 3 2799 | 1086 |
| 1087 | 00·36 | 3 | 98 11 54·1 | +18·306 | −0·196 | −0·046 | 1796 | 25258 | 580 | | 3545 | 3525 | − 7 3674 | 1087 |
| 1088 | 98·33 | 3 | 81 6 14·7 | +18·273 | −0·187 | 0·000 | | 25288 | 600 | | | | + 9 2798 | 1088 |
| 1089 | 97·32 | 3 | 85 57 20·7 | +18·245 | −0·191 | +0·062 | 1800 | 25297 | 614 | 4781 | | | + 4 2775 | 1089 |
| 1090 | 98·74 | 3 | 94 59 42·5 | +18·221 | −0·198 | +0·011 | | 25314 | 624 | | 3554 | 3531 | − 4 3540 | 1090 |
| 1091 | 02·33 | 3 | 88 47 43·7 | +18·197 | −0·195 | | | 25337 | | 4786 | | | + 1 2840 | 1091 |
| 1092 | 95·41 | 4 | 122 32 17·9 | +18·173 | −0·219 | +0·151 | 1803 | | | | 3562 | | | 1092 |
| 1093 | 99·41 | 3 | 84 22 56·9 | +18·132 | −0·196 | | | 25380 | 670 | | | | + 5 2794 | 1093 |
| 1094 | 98·02 | 3 | 83 8 47·3 | +18·099 | −0·196 | +0·121 | | 25404 | 679 | | | | + 7 2690 | 1094 |
| 1095 | 96·71 | 3 | 72 2 41·2 | +18·080 | −0·190 | −0·040 | 1810 | 25426 | | | 3574 | 3551 | +18 2782 | 1095 |
| 1096 | 02·41 | 3 | 84 57 19·6 | +18·012 | −0·201 | | | | 723 | | | | + 5 2801 | 1096 |
| 1097 | 98·03 | 3 | 83 9 28·2 | +18·004 | −0·201 | | | 25466 | 728 | | | | + 7 2701 | 1097 |
| 1098 | 98·41 | 3 | 84 0 23·2 | +17·969 | −0·203 | | | 25485 | 739 | | | | + 6 2800 | 1098 |
| 1099 | 97·35 | 3 | 28 59 2·4 | +17·913 | −0·138 | | | | | | | | +61 1381 | 1099 |
| 1100 | 02·34 | 3 | 88 40 53·0 | +17·885 | −0·209 | | | 25528 | 767 | 4807 | | | + 1 2857 | 1100 |
| 1101 | 96·43 | 3 | 71 6 3·0 | +17·790 | −0·200 | +0·344 | 1821 | 25608 | | | 3607 | 3577 | +19 2725 | 1101 |
| 1102 | 97·66 | 3 | 88 27 36·4 | +17·731 | −0·216 | −0·018 | 1822 | 25633 | | 4825 | | | + 1 2865 | 1102 |
| 1103 | 02·34 | 3 | 86 31 25·8 | +17·721 | −0·215 | | | 25641 | 850 | 4828 | | | + 3 2834 | 1103 |
| 1104 | 98·03 | 3 | 89 27 51·6 | +17·596 | −0·222 | | | 25705 | 896 | | | | + 0 3118 | 1104 |
| 1105 | 97·35 | 3 | 85 15 49·5 | +17·515 | −0·222 | | | 25751 | 935 | 4845 | | | + 4 2816 | 1105 |
| 1106 | 00·36 | 3 | 87 58 17·4 | +17·514 | −0·224 | +0·033 | 1829 | 25747 | 934 | 4844 | 3631 | 3597 | + 2 2761 | 1106 |
| 1107 | 98·42 | 3 | 85 58 11·7 | +17·463 | −0·225 | +0·098 | | 25794 | 961 | 4855 | | | + 4 2817 | 1107 |
| 1108 | 99·09 | 3 | 81 58 20·7 | +17·424 | −0·223 | | | 25816 | 982 | | | | + 8 2810 | 1108 |
| 1109 | 99·42 | 3 | 84 37 5·8 | +17·413 | −0·225 | | | 25827 | | | | | + 5 2836 | 1109 |
| 1110 | 99·07 | 3 | 87 13 21·5 | +17·385 | −0·228 | | | 25849 | 1004 | 4865 | | | + 2 2768 | 1110 |
| 1111 | 02·61 | 3 | 98 24 51·3 | +17·322 | −0·241 | −0·012 | 1833 | 25879 | 1030 | | 3652 | 3609 | − 8 3696 | 1111 |
| 1112 | 99·07 | 3 | 82 31 1·5 | +17·303 | −0·227 | | | 25892 | 1045 | | | | + 7 2746 | 1112 |
| 1113 | 98·39 | 3 | 89 42 48·2 | +17·253 | −0·235 | | | 25904 | | | | | + 0 3134 | 1113 |
| 1114 | 99·41 | 3 | 89 34 48·5 | +17·246 | −0·236 | | | 25911 | 1062 | | | | + 0 3135 | 1114 |
| 1115 | 01·70 | 3 | 86 43 43·4 | +17·169 | −0·236 | | | 25947 | 12 | 4882 | | | + 3 2859 | 1115 |
| 1116 | 97·34 | 3 | 88 43 39·5 | +17·111 | −0·240 | | | 25990 | 40 | 4888 | | | + 1 2895 | 1116 |
| 1117 | 98·42 | 3 | 88 10 3·2 | +17·077 | −0·240 | | | 26017 | 51 | 4895 | | | + 2 2783 | 1117 |
| 1118 | 98·06 | 3 | 87 7 11·0 | +17·042 | −0·241 | | | 26031 | 64 | 4897 | | 3626 | + 3 2867 | 1118 |
| 1119 | 97·93 | 4 | 99 48 29·4 | +17·026 | −0·254 | −0·141 | 1842 | 26035 | 68 | | 3674 | 3628 | − 9 3878 | 1119 |
| 1120 | 98·38 | 3 | 86 11 48·0 | +16·919 | −0·244 | | | 26093 | 114 | 4911 | | | + 4 2841 | 1120 |
| 1121 | 02·34 | 3 | 70 17 48·8 | +16·860 | −0·229 | +1·977 | 1847 | 26132 | | | 3692 | 3641 | +19 2777 | 1121 |
| 1122 | 99·40 | 3 | 83 27 15·2 | +16·848 | −0·244 | | | | 146 | | | | + 6 2863 | 1122 |
| 1123 | 97·34 | 3 | 85 48 16·5 | +16·784 | −0·248 | | | 26152 | 175 | 4920 | | | + 4 2844 | 1123 |
| 1124 | 97·71 | 3 | 85 51 45·5 | +16·747 | −0·249 | | | 26173 | 191 | 4922 | | | + 4 2847 | 1124 |
| 1125 | 98·42 | 3 | 89 9 18·8 | +16·693 | −0·255 | | | 26200 | 213 | 4927 | | | + 1 2913 | 1125 |

1088, 1094. Authority for Proper Motions: Bossert. 1090. Authority for Proper Motions: Auwers (Mayer's Sternverzeichnis). 1107. The Proper Motion adopted is the mean of Boss and Bossert.

| No. | Constellation. | Magnitude. | Number of Estimations. | Mean Year and Fraction of Year. | Number of Observations. | Mean R.A. | Precess. | Sec. Var. | Proper Motion. | No. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | h. m. s. | s. | s. | s. | |
| 1126 | Virginis ... ... ... | 7·0 | ... | 98·72 | 3 | 14 15 22·67 | +3·0643 | +0·0076 | | 1126 |
| 1127 | Virginis ... ... ... | 7·4 | 1 | 01·71 | 3 | 14 17 38·83 | +3·0751 | +0·0080 | | 1127 |
| 1128 | Virginis ... ... ... | 6·9 | 2 | 97·35 | 3 | 14 18 8·38 | +3·0501 | +0·0072 | +0·0150 | 1128 |
| 1129 | Boötis ... ... ... ... | 5·8 | 1 | 98·76 | 3 | 14 19 12·67 | +2·9888 | +0·0055 | | 1129 |
| 1130 | Virginis ... ... ... | 7·0 | ... | 98·73 | 3 | 14 20 50·36 | +3·0533 | +0·0074 | | 1130 |
| 1131 | Boötis ... ... ... ... | 7·2 | ... | 99·42 | 3 | 14 21 43·38 | +2·9859 | +0·0055 | | 1131 |
| 1132 | 22 Boötis ... ... ... *f* | 5·3 | ... | 98·74 | 17 | 14 21 48·24 | +2·7954 | +0·0010 | −0·0057 | 1132 |
| 1133 | Virginis ... ... RS | Var. | 2 | 03·07 | 2 | 14 22 15·82 | +3·0029 | +0·0060 | | 1133 |
| 1134 | Virginis ... ... ... | 7·3 | 1 | 98·75 | 3 | 14 23 29·23 | +3·0285 | +0·0068 | −0·0140 | 1134 |
| 1135 | Virginis ... ... ... | 7·0 | 1 | 99·41 | 3 | 14 23 54·58 | +3·0155 | +0·0064 | | 1135 |
| 1136 | Virginis ... ... ... | 6·3 | 2 | 98·03 | 3 | 14 24 44·52 | +3·0552 | +0·0076 | | 1136 |
| 1137 | Virginis ... ... ... | 6·5 | 1 | 98·73 | 3 | 14 25 45·01 | +3·0002 | +0·0061 | | 1137 |
| 1138 | Virginis ... ... ... | 7·4 | ... | 98·76 | 3 | 14 27 11·85 | +3·0085 | +0·0063 | | 1138 |
| 1139 | 25 Boötis ... ... ... *ρ* | 4·0 | ... | 00·13 | 13 | 14 27 31·18 | +2·5943 | −0·0015 | −0·0085 | 1139 |
| 1140 | Virginis ... ... ... | 7·0 | 2 | 99·09 | 3 | 14 28 3·48 | +2·9914 | +0·0059 | | 1140 |
| 1141 | Boötis ... ... ... ... | 6·4 | ... | 97·41 | 3 | 14 29 15·01 | +2·4532 | −0·0024 | | 1141 |
| 1142 | Virginis ... ... ... | 7·9 | 2 | 01·73 | 3 | 14 30 34·42 | +3·0170 | +0·0067 | | 1142 |
| 1143 | Virginis ... ... ... | 7·3 | 2 | 97·34 | 3 | 14 32 24·94 | +3·0336 | +0·0071 | | 1143 |
| 1144 | Virginis ... ... ... | 8·1 | ... | 98·06 | 3 | 14 36 19·64 | +3·0649 | +0·0081 | | 1144 |
| 1145 | Virginis ... ... ... | 8·0 | 2 | 01·73 | 3 | 14 39 53·77 | +3·0141 | +0·0068 | | 1145 |
| 1146 | 108 Virginis ... ... ... | 5·5 | ... | 98·40 | 3 | 14 40 24·49 | +3·0556 | +0·0079 | −0·0050 | 1146 |
| 1147 | 36 Boötis ... ... ... $\epsilon^2$ | 2·6 | ... | 00·27 | 9 | 14 40 37·13 | +2·6241 | +0·0001 | −0·0043 | 1147 |
| 1148 | 109 Virginis ... ... ... | 3·8 | ... | 99·41 | 3 | 14 41 11·47 | +3·0378 | +0·0074 | −0·0090 | 1148 |
| 1149 | Virginis ... ... ... | 6·6 | ... | 99·08 | 3 | 14 41 59·98 | +3·0516 | +0·0078 | | 1149 |
| 1150 | Virginis ... ... ... | 7·7* | ... | 98·10 | 3 | 14 42 21·86 | +3·0354 | +0·0074 | | 1150 |
| 1151 | Virginis ... ... ... | 7·5 | 1 | 99·42 | 3 | 14 43 55·45 | +2·9748 | +0·0060 | | 1151 |
| 1152 | Virginis ... ... ... | 7·5 | 1 | 99·10 | 3 | 14 44 43·51 | +3·0068 | +0·0068 | | 1152 |
| 1153 | 9 Librae ... ... *α* | 2·7 | ... | 98·18 | 13 | 14 45 20·64 | +3·3197 | +0·0155 | −0·0093 | 1153 |
| 1154 | Librae ... ... ... | 6·5 | 2 | 99·10 | 3 | 14 45 52·79 | +3·0703 | +0·0083 | | 1154 |
| 1155 | Virginis ... ... ... | 7·1 | ... | 98·43 | 3 | 14 48 35·93 | +3·0312 | +0·0074 | | 1155 |
| 1156 | Virginis ... ... ... | 6·7 | ... | 99·41 | 3 | 14 48 42·85 | +2·9681 | +0·0060 | | 1156 |
| 1157 | Virginis ... ... ... | 7·3 | 1 | 99·44 | 3 | 14 50 26·62 | +2·9585 | +0·0059 | | 1157 |
| 1158 | Boötis ... ... ... | 7·8 | 2 | 01·40 | 3 | 14 50 29·18 | +2·7767 | +0·0027 | | 1158 |
| 1159 | Virginis ... ... ... | 7·1 | ... | 99·11 | 3 | 14 51 15·51 | +3·0120 | +0·0070 | | 1159 |
| 1160 | 15 Librae ... ... $\xi^2$ | 5·7 | ... | 99·10 | 10 | 14 51 20·41 | +3·2495 | +0·0131 | −0·0019 | 1160 |
| 1161 | Boötis ... ... ... ... | 7·3 | 1 | 97·40 | 4 | 14 52 13·47 | +2·2642 | −0·0004 | | 1161 |
| 1162 | 1 Serpentis ... ... ... | 6·3 | 1 | 99·42 | 3 | 14 52 25·48 | +3·0690 | +0·0083 | +0·0017 | 1162 |
| 1163 | Virginis ... ... ... | 6·3 | 1 | 99·41 | 3 | 14 54 23·50 | +2·9926 | +0·0066 | | 1163 |
| 1164 | Virginis ... ... ... | 7·0 | 2 | 98·41 | 3 | 14 55 59·68 | +3·0192 | +0·0072 | −0·0060 | 1164 |
| 1165 | 2 Serpentis ... ... ... | 5·9 | ... | 98·76 | 3 | 14 56 41·57 | +3·0686 | +0·0083 | −0·0001 | 1165 |
| 1166 | 110 Virginis ... ... ... | 4·7 | ... | 99·41 | 3 | 14 57 50·75 | +3·0321 | +0·0075 | −0·0050 | 1166 |
| 1167 | Virginis ... ... ... | 7·5 | 1 | 99·42 | 3 | 14 58 21·33 | +2·9869 | +0·0066 | | 1167 |
| 1168 | Virginis ... ... ... | 8·0 | 1 | 00·42 | 3 | 14 59 8·36 | +2·9756 | +0·0064 | | 1168 |
| 1169 | Virginis ... ... ... | 7·7 | 1 | 00·42 | 3 | 14 59 8·58 | +2·9757 | +0·0064 | | 1169 |
| 1170 | 43 Boötis ... ... ... *ψ* | 4·8 | ... | 98·70 | 10 | 15 0 9·58 | +2·5837 | +0·0012 | −0·0145 | 1170 |

1129. A star (B.D. +6° 2874), magnitude 7·3, precedes several seconds at nearly same N.P.D. 1132. B.D. magnitude, 6·4; Radcliffe, 1890, 5·0. 1133. 1903 Jan. 22, mag. 7·5 (probably brighter); 1903 Jan. 28, reddish, mag. 7·3. Chandler's limits are 8·2 and about 12; the period is 355 days. 1147. 1902 June 2: the companion, $\epsilon^1$, precedes 0ˢ·02. 1155. The R.A. of this star in W.B. (1) appears to be 10ˢ too great.

| No. | Mean Year and Fraction of Year. | Number of Observations. | Mean N.P.D. | Precess. | Sec. Var. | Proper Motion. | Auwers' Bradley, 1755. | Lalande, 1800. | Weisse's Bessel (1), 1825. | Albany (A. G.), 1875. | Radcliffe, 1890. | Greenwich, 1890. | B.D. | No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ° ′ ″ | ″ | ″ | ″ | | | | | | | ° | |
| 1126 | 98·72 | 3 | 89 21 24·5 | +16·654 | −0·256 | | | 26221 | 225 | 4931 | | | +0 3165 | 1126 |
| 1127 | 01·71 | 3 | 90 10 50·2 | +16·543 | −0·261 | | | 26273 | 271 | | 3724 | | +0 3171 | 1127 |
| 1128 | 97·35 | 3 | 88 17 23·8 | +16·519 | −0·259 | +0·500 | | 26289 | 281 | 4941 | | 3663 | +1 2920 | 1128 |
| 1129 | 98·76 | 3 | 83 43 34·2 | +16·465 | −0·256 | | | 26315 | 303 | | | | +6 2875 | 1129 |
| 1130 | 98·73 | 3 | 88 33 18·0 | +16·383 | −0·264 | | | 26356 | | 4953 | | | +1 2927 | 1130 |
| 1131 | 99·42 | 3 | 83 36 42·9 | +16·338 | −0·260 | | | 26381 | 349 | | | | +6 2883 | 1131 |
| 1132 | 97·17 | 4 | 70 19 24·8 | +16·335 | −0·244 | −0·029 | 1864 | 26396 | | | 3737 | 3679 | +19 2810 | 1132 |
| 1133 | 03·07 | 2 | 84 52 21·4 | +16·311 | −0·262 | | | | | | | | | 1133 |
| 1134 | 98·75 | 3 | 86 45 53·5 | +16·249 | −0·266 | −0·030 | | 26427 | | 4965 | | | +3 2896 | 1134 |
| 1135 | 99·41 | 4 | 85 50 1·4 | +16·227 | −0·265 | | | 26440 | 394 | 4969 | | | +4 2871 | 1135 |
| 1136 | 98·03 | 3 | 88 43 32·5 | +16·184 | −0·270 | | | 26464 | 407 | 4975 | | | +1 2941 | 1136 |
| 1137 | 98·73 | 3 | 84 46 58·3 | +16·132 | −0·267 | | | 26492 | 427 | | | | +5 2886 | 1137 |
| 1138 | 98·76 | 3 | 85 24 54·9 | +16·057 | −0·270 | | | | 453 | 4982 | | | +4 2878 | 1138 |
| 1139 | 00·76 | 3 | 59 11 22·3 | +16·040 | −0·234 | −0·125 | 1869 | 26550 | | | 3765 | 3694 | +31 2628 | 1139 |
| 1140 | 99·16 | 4 | 84 14 0·3 | +16·011 | −0·270 | | | 26544 | 464 | | | | +5 2889 | 1140 |
| 1141 | 97·41 | 3 | 52 35 55·6 | +15·948 | −0·224 | | | 26592 | | | | 3700 | +37 2545 | 1141 |
| 1142 | 01·73 | 3 | 86 5 40·0 | +15·878 | −0·276 | | | 26604 | 513 | 4997 | | | +4 2885 | 1142 |
| 1143 | 97·34 | 3 | 87 17 12·2 | +15·779 | −0·280 | | | 26653 | 551 | 5008 | | | +2 2844 | 1143 |
| 1144 | 98·06 | 3 | 89 28 2·2 | +15·565 | −0·289 | | | | | | | | +0 3223 | 1144 |
| 1145 | 01·73 | 3 | 86 5 33·8 | +15·367 | −0·289 | | | | 691 | 5038 | | | +4 2909 | 1145 |
| 1146 | 98·40 | 3 | 88 51 36·7 | +15·338 | −0·294 | −0·001 | 1884 | | 704 | 5044 | | | +1 2972 | 1146 |
| 1147 | 99·43 | 3 | 62 30 14·5 | +15·326 | −0·253 | −0·001 | 1890 | 26908 | | | 3818 | 3737 | +27 2417 | 1147 |
| 1148 | 99·41 | 3 | 87 41 8·6 | +15·294 | −0·293 | +0·026 | 1889 | 26902 | 718 | 5046 | | 3738 | +2 2862 | 1148 |
| 1149 | 99·08 | 3 | 88 36 31·2 | +15·248 | −0·296 | | | 26926 | | 5050 | | | +1 2981 | 1149 |
| 1150 | 98·10 | 3 | 87 32 39·3 | +15·227 | −0·295 | | | 26936 | 746 | 5056 | | | +2 2865 | 1150 |
| 1151 | 99·42 | 3 | 83 37 36·2 | +15·138 | −0·291 | | | 26980 | 777 | | | 3747 | +6 2946 | 1151 |
| 1152 | 99·10 | 3 | 85 42 46·7 | +15·092 | −0·295 | | | 27001 | | 5063 | | | +4 2924 | 1152 |
| 1153 | 98·44 | 3 | 105 37 34·5 | +15·056 | −0·326 | +0·072 | 1894 | 27008 | | | 3836 | 3751 | −15 3966 | 1153 |
| 1154 | 00·41 | 5 | 89 50 39·3 | +15·025 | −0·303 | | | 27039 | 818 | | 3838 | | +0 3253 | 1154 |
| 1155 | 98·43 | 3 | 87 21 11·3 | +14·866 | −0·303 | | | 27117 | 879 | 5080 | | | +2 2881 | 1155 |
| 1156 | 99·41 | 3 | 83 20 58·5 | +14·860 | −0·297 | | | 27135 | 880 | | | 3767 | +6 2957 | 1156 |
| 1157 | 99·44 | 3 | 82 48 32·6 | +14·757 | −0·298 | | | 27162 | 907 | | | 3772 | +7 2865 | 1157 |
| 1158 | 01·40 | 3 | 71 53 28·0 | +14·755 | −0·281 | | | 27176 | | | | | +18 2955 | 1158 |
| 1159 | 99·11 | 3 | 86 10 41·7 | +14·709 | −0·305 | | | 27196 | 924 | 5094 | | | +3 2956 | 1159 |
| 1160 | 00·42 | 3 | 101 0 22·0 | +14·705 | −0·329 | −0·006 | 1903 | 27182 | | | 3859 | 3775 | −10 3989 | 1160 |
| 1161 | 97·40 | 4 | 48 27 38·5 | +14·652 | −0·232 | | | 27273 | | | | | +41 2539 | 1161 |
| 1162 | 99·42 | 3 | 89 45 52·1 | +14·640 | −0·312 | +0·006 | 1908 | 27233 | 945 | | 3866 | | +0 3277 | 1162 |
| 1163 | 99·41 | 3 | 85 1 58·3 | +14·522 | −0·307 | | | 27297 | 983 | 5104 | | | +5 2954 | 1163 |
| 1164 | 98·41 | 3 | 86 42 14·5 | +14·424 | −0·312 | +0·080 | | 27337 | 1009 | 5111 | | | +3 2966 | 1164 |
| 1165 | 98·76 | 3 | 89 44 41·2 | +14·382 | −0·318 | +0·010 | 1912 | 27352 | 1019 | | 3882 | | +0 3297 | 1165 |
| 1166 | 99·41 | 3 | 87 30 57·2 | +14·312 | −0·316 | −0·010 | 1915 | 27393 | | 5118 | | 3799 | +2 2905 | 1166 |
| 1167 | 99·42 | 3 | 84 46 24·0 | +14·280 | −0·312 | | | 27411 | 1058 | | | | +5 2962 | 1167 |
| 1168 | 00·42 | 3 | 84 6 45·0 | +14·232 | −0·312 | | | 27430 | 1074 | | | | +6 2983 | 1168 |
| 1169 | 00·42 | 3 | 84 6 54·6 | +14·232 | −0·312 | | | 27431 | 1075 | | | | +6 2983 | 1169 |
| 1170 | 99·42 | 3 | 62 39 44·5 | +14·169 | −0·273 | +0·008 | 1922 | 27481 | | | 3896 | 3806 | +27 2447 | 1170 |

1128. Authority for Proper Motions: Porter.

1134. The Proper Motions have been specially computed for the present catalogue.

1164. Authority for Proper Motions: Boss.

| No. | Constellation. | Magnitude. | Number of Estimations. | Mean Year and Fraction of Year. | Number of Observations. | Mean R.A. | Precess. | Sec. Var. | Proper Motion. | No. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | h. m. s. | s. | s. | s. | |
| 1171 | Virginis ... ... ... | 7·3 | ... | 99·42 | 3 | 15 0 58·68 | + 2·9960 | +0·0068 | | 1171 |
| 1172 | Virginis ... ... ... | 7·1 | ... | 99·43 | 3 | 15 1 20·49 | + 2·9738 | +0·0064 | | 1172 |
| 1173 | Virginis ... ... ... | 6·8 | ... | 97·44 | 3 | 15 2 3·72 | + 3·0269 | +0·0074 | | 1173 |
| 1174 | Virginis ... ... ... | 6·1 | ... | 99·43 | 3 | 15 2 42·61 | + 2·9742 | +0·0064 | | 1174 |
| 1175 | Serpentis ... ... ... | 7·0 | ... | 98·92 | 4 | 15 4 27·31 | + 3·0012 | +0·0070 | | 1175 |
| 1176 | Serpentis ... ... ... | 8·4 | 2 | 02·86 | 3 | 15 6 24·74 | + 3·0121 | +0·0072 | | 1176 |
| 1177 | 24 Librae ... ... $\iota^1$ | 4·5 | ... | 99·30 | 14 | 15 6 31·15 | + 3·4152 | +0·0171 | −0·0037 | 1177 |
| 1178 | Ursae Minoris ... ... | 7·2 | 2 | 01·53 | 8 | 15 9 20·94 | −20·5566 | +7·0170 | +0·0072 | 1178 |
| 1179 | 3 Serpentis ... ... ... | 6·5 | 1 | 02·86 | 3 | 15 10 13·03 | + 2·9810 | +0·0067 | −0·0020 | 1179 |
| 1180 | 4 Serpentis ... ... ... | 5·8 | ... | 97·47 | 3 | 15 10 43·33 | + 3·0599 | +0·0081 | −0·0081 | 1180 |
| 1181 | Serpentis ... ... ... | 7·1 | ... | 99·09 | 3 | 15 10 52·26 | + 3·0525 | +0·0080 | +0·0070 | 1181 |
| 1182 | 27 Librae ... ... $\beta$ | 2·6 | ... | 98·80 | 13 | 15 11 37·40 | + 3·2301 | +0·0118 | −0·0079 | 1182 |
| 1183 | Serpentis ... ... ... | 6·7 | ... | 99·43 | 3 | 15 13 16·94 | + 3·0500 | +0·0079 | | 1183 |
| 1184 | 5 Serpentis ... ... ... | 5·2 | ... | 98·44 | 3 | 15 14 12·34 | + 3·0352 | +0·0077 | +0·0238 | 1184 |
| 1185 | Serpentis ... ... ... | 8·5 | 1 | 02·86 | 3 | 15 14 41·86 | + 3·0079 | +0·0071 | | 1185 |
| 1186 | 6 Serpentis ... ... ... | 5·4 | ... | 97·16 | 3 | 15 15 56·46 | + 3·0538 | +0·0080 | −0·0053 | 1186 |
| 1187 | Serpentis ... ... S | Var. | 2 | 97·12 | 3 | 15 16 58·49 | + 2·8076 | +0·0042 | | 1187 |
| 1188 | 30 Librae ... ... $o^2$ | 6·5 | 1 | 99·55 | 7 | 15 17 27·03 | + 3·3403 | +0·0142 | −0·0025 | 1188 |
| 1189 | Serpentis ... ... ... | 8·0 | 1 | 03·21 | 3 | 15 17 40·51 | + 3·0410 | +0·0077 | −0·0267 | 1189 |
| 1190 | Serpentis ... ... ... | 7·3 | 2 | 98·77 | 3 | 15 17 55·46 | + 3·0582 | +0·0081 | | 1190 |
| 1191 | 32 Librae ... ... $\zeta^1$ | 5·9 | ... | 99·58 | 16 | 15 22 36·89 | + 3·3764 | +0·0148 | −0·0010 | 1191 |
| 1192 | Serpentis ... ... ... | 7·1 | ... | 97·80 | 3 | 15 23 27·29 | + 3·0555 | +0·0080 | | 1192 |
| 1193 | 10 Serpentis ... ... ... | 5·7 | 1 | 98·78 | 3 | 15 23 35·06 | + 3·0331 | +0·0076 | −0·0068 | 1193 |
| 1194 | Serpentis ... ... ... | 7·8* | ... | 99·09 | 3 | 15 26 37·54 | + 3·0503 | +0·0078 | −0·0047 | 1194 |
| 1195 | Serpentis ... ... ... | 7·7* | ... | 02·40 | 3 | 15 28 17·25 | + 3·0053 | +0·0071 | | 1195 |
| 1196 | Serpentis ... ... ... | 7·0 | 1 | 02·86 | 3 | 15 29 33·64 | + 2·9788 | +0·0067 | | 1196 |
| 1197 | Serpentis ... ... ... | 6·3 | 1 | 97·47 | 3 | 15 30 1·18 | + 3·0356 | +0·0076 | | 1197 |
| 1198 | Serpentis ... ... ... | 8·6 | 2 | 02·98 | 3 | 15 30 2·73 | + 3·0527 | +0·0079 | | 1198 |
| 1199 | 5 Coronae ... ... $\alpha$ | 2·2 | ... | 01·19 | 26 | 15 30 27·18 | + 2·5303 | +0·0024 | +0·0085 | 1199 |
| 1200 | Serpentis ... ... ... | 6·7 | ... | 97·50 | 3 | 15 30 44·49 | + 3·0437 | +0·0077 | | 1200 |
| 1201 | Serpentis ... ... ... | 7·0 | 1 | 98·94 | 4 | 15 34 0·76 | + 3·0015 | +0·0070 | | 1201 |
| 1202 | Serpentis ... ... ... | 7·4 | ... | 98·77 | 3 | 15 36 55·00 | + 3·0580 | +0·0078 | | 1202 |
| 1203 | Serpentis ... ... ... | 9·0 | 1 | 97·45 | 3 | 15 37 22·04 | + 3·0039 | +0·0070 | | 1203 |
| 1204 | Serpentis ... ... ... | 7·5 | 1 | 97·15 | 3 | 15 37 55·52 | + 2·9886 | +0·0068 | | 1204 |
| 1205 | Serpentis ... ... ... | 7·7* | ... | 01·44 | 4 | 15 38 43·92 | + 3·0202 | +0·0073 | | 1205 |
| 1206 | 23 Serpentis ... ... $\psi$ | 6·7 | 1 | 99·44 | 3 | 15 38 59·96 | + 3·0186 | +0·0072 | −0·0063 | 1206 |
| 1207 | 24 Serpentis ... ... $\alpha$ | 2·8 | ... | 01·53 | 27 | 15 39 20·44 | + 2·9436 | +0·0062 | +0·0079 | 1207 |
| 1208 | Serpentis ... ... ... | 7·2 | ... | 99·45 | 3 | 15 39 30·20 | + 3·0023 | +0·0070 | | 1208 |
| 1209 | Serpentis ... ... ... | 6·5 | ... | 99·47 | 3 | 15 40 34·02 | + 3·0496 | +0·0077 | | 1209 |
| 1210 | Serpentis ... ... ... | 7·2 | ... | 99·46 | 3 | 15 42 10·99 | + 3·0719 | +0·0080 | −0·0168 | 1210 |
| 1211 | Serpentis ... ... ... | 7·0 | 1 | 98·81 | 3 | 15 42 22·61 | + 3·0370 | +0·0074 | | 1211 |
| 1212 | 35 Serpentis ... ... $\kappa$ | 4·3 | ... | 02·68 | 3 | 15 44 14·28 | + 2·7027 | +0·0039 | −0·0039 | 1212 |
| 1213 | Coronae ... ... R | Var. | 3 | 97·16 | 3 | 15 44 27·14 | + 2·4711 | +0·0027 | | 1213 |
| 1214 | 34 Serpentis ... ... $\omega$ | 5·5 | ... | 97·51 | 3 | 15 45 14·57 | + 3·0241 | +0·0072 | +0·0031 | 1214 |
| 1215 | 37 Serpentis ... ... $\epsilon$ | 3·0 | 1 | 00·61 | 27 | 15 45 49·77 | + 2·9796 | +0·0066 | +0·0068 | 1215 |

1178. Light orange. 1179. Harvard magnitude, 5·4; B.D., 5·3. 1187. 1897 June 10, mag. 9; 1897 June 23, reddish, mag. 8·3. The limits are 7·6 and about 12·5; the period is 368 days. 1191. Slightly red. 1198. A star (Albany 5243) follows, magnitude 9·3. 1207. Reddish. 1213. 1896 April 29, mag. 6·0; 1897 July 3 and 1897 July 13, mag. about 6. The limits are 5·8 and 13·0; the period is irregular.

| No. | Mean Year and Fraction of Year. | Number of Observations. | Mean N.P.D. | Precess. | Sec. Var. | Proper Motion. | Auwers' Bradley, 1755. | Lalande, 1800. | Weisse's Bessel (1), 1825. | Albany (A. G.), 1875. | Radcliffe, 1890. | Greenwich, 1890. | B.D. | No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ° ′ ″ | ″ | ″ | ″ | | | | | | | ° | |
| 1171 | 99·42 | 3 | 85 22 43·5 | +14·118 | −0·316 | | | 27489 | 1105 | 5134 | | | + 4 2964 | 1171 |
| 1172 | 99·43 | 3 | 84 3 43·7 | +14·096 | −0·314 | | | 27496 | 1112 | | | | + 6 2995 | 1172 |
| 1173 | 97·44 | 3 | 87 15 4·1 | +14·051 | −0·321 | | | 27507 | 1123 | 5141 | | | + 2 2915 | 1173 |
| 1174 | 99·43 | 3 | 84 6 59·3 | +14·010 | −0·316 | | | 27541 | 1141 | | | | + 6 3001 | 1174 |
| 1175 | 98·92 | 4 | 85 45 6·3 | +13·901 | −0·321 | | | 27599 | 19 | 5148 | | | + 4 2970 | 1175 |
| 1176 | 02·86 | 3 | 86 25 42·4 | +13·777 | −0·325 | | | | 54 | 5155 | | | + 3 2991 | 1176 |
| 1177 | 97·78 | 3 | 109 24 47·7 | +13·770 | −0·368 | +0·042 | 1927 | 27649 | | | 3920 | 3829 | −19 4047 | 1177 |
| 1178 | 00·79 | 18 | 2 22 56·2 | +13·589 | +2·199 | −0·031 | | | | | | 3855 | +87 143 | 1178 |
| 1179 | 02·86 | 3 | 84 41 21·4 | +13·533 | −0·327 | −0·003 | 1932 | 27790 | 131 | | | | + 5 2985 | 1179 |
| 1180 | 97·47 | 3 | 89 15 27·9 | +13·500 | −0·336 | −0·002 | 1933 | 27800 | 136 | 5174 | | | + 0 3327 | 1180 |
| 1181 | 99·09 | 3 | 88 49 47·4 | +13·491 | −0·335 | +0·102 | | 27808 | 140 | 5176 | | | + 1 3052 | 1181 |
| 1182 | 00·81 | 3 | 99 0 49·6 | +13·442 | −0·355 | +0·017 | 1934 | 27821 | 154 | | 3943 | 3851 | − 8 3935 | 1182 |
| 1183 | 99·43 | 3 | 88 41 39·4 | +13·334 | −0·338 | | | 27885 | 186 | 5183 | | | + 1 3059 | 1183 |
| 1184 | 98·21 | 4 | 87 51 22·0 | +13·273 | −0·338 | +0·528 | 1937 | 27917 | | 5186 | | 3857 | + 2 2944 | 1184 |
| 1185 | 02·86 | 3 | 86 18 16·0 | +13·241 | −0·335 | | | 27939 | 216 | 5189 | | | + 3 3009 | 1185 |
| 1186 | 97·16 | 3 | 88 55 15·4 | +13·159 | −0·342 | +0·098 | 1940 | 27974 | 233 | 5190 | | | + 1 3067 | 1186 |
| 1187 | 97·12 | 3 | 75 19 33·8 | +13·091 | −0·316 | | | 28014 | | | | 3869 | +14 2864 | 1187 |
| 1188 | 99·93 | 4 | 104 46 37·3 | +13·059 | −0·375 | −0·013 | 1941 | 28000 | 256 | | 3966 | 3874 | −14 4188 | 1188 |
| 1189 | 03·21 | 3 | 88 12 49·4 | +13·044 | −0·342 | +0·344 | | | 268 | 5192 | | | + 1 3071 | 1189 |
| 1190 | 98·77 | 3 | 89 10 42·2 | +13·028 | −0·345 | | | 28033 | 274 | 5194 | | | + 0 3349 | 1190 |
| 1191 | 98·61 | 6 | 106 22 3·8 | +12·713 | −0·386 | +0·046 | 1949 | 28160 | | | 3986 | 3904 | −16 4089 | 1191 |
| 1192 | 97·80 | 3 | 89 2 47·0 | +12·656 | −0·351 | | | | 388 | 5213 | | | + 1 3084 | 1192 |
| 1193 | 98·78 | 3 | 87 48 38·4 | +12·647 | −0·349 | +0·039 | 1952 | 28200 | 394 | 5216 | | | + 2 2965 | 1193 |
| 1194 | 99·09 | 3 | 88 46 24·0 | +12·440 | −0·354 | +0·095 | | 28283 | 443 | 5230 | | | + 1 3092 | 1194 |
| 1195 | 02·40 | 3 | 86 20 20·4 | +12·325 | −0·351 | | | 28337 | 478 | 5234 | | | + 3 3048 | 1195 |
| 1196 | 02·86 | 3 | 84 56 1·9 | +12·237 | −0·349 | | | 28370 | 501 | | | | + 5 3037 | 1196 |
| 1197 | 97·47 | 3 | 87 59 45·5 | +12·205 | −0·356 | | | 28381 | 505 | 5239 | | 3929 | + 2 2977 | 1197 |
| 1198 | 02·98 | 3 | 88 55 10·6 | +12·204 | −0·358 | | | | | 5240 | | | + 1 3098 | 1198 |
| 1199 | 00·70 | 8 | 62 56 55·2 | +12·176 | −0·298 | +0·094 | 1973 | 28417 | | | 4022 | 3933 | +27 2512 | 1199 |
| 1200 | 97·50 | 3 | 88 26 23·6 | +12·155 | −0·358 | | | 28401 | | 5245 | | | + 1 3101 | 1200 |
| 1201 | 98·94 | 4 | 86 12 16·6 | +11·926 | −0·357 | | | 28513 | 603 | 5253 | | | + 3 3061 | 1201 |
| 1202 | 98·77 | 3 | 89 13 18·8 | +11·721 | −0·367 | | | 28598 | 660 | 5262 | | | + 0 3389 | 1202 |
| 1203 | 97·45 | 3 | 86 22 25·8 | +11·689 | −0·361 | | | | 671 | 5264 | | | + 3 3077 | 1203 |
| 1204 | 97·15 | 3 | 85 34 44·6 | +11·650 | −0·360 | | | | 681 | 5266 | | | + 4 3051 | 1204 |
| 1205 | 01·11 | 3 | 87 14 34·2 | +11·592 | −0·364 | | | 28664 | 699 | 5267 | | | + 2 2987 | 1205 |
| 1206 | 99·44 | 3 | 87 9 50·6 | +11·573 | −0·365 | +0·145 | 1989 | 28673 | 707 | 5269 | | | + 2 2989 | 1206 |
| 1207 | 00·42 | 3 | 83 15 35·2 | +11·549 | −0·356 | −0·056 | 1990 | 28690 | 712 | | 4064 | 3974 | + 6 3088 | 1207 |
| 1208 | 99·45 | 3 | 86 18 47·1 | +11·537 | −0·363 | | | | 715 | 5273 | | | + 3 3080 | 1208 |
| 1209 | 99·47 | 3 | 88 47 44·9 | +11·461 | −0·370 | | | | | 5278 | | | + 1 3125 | 1209 |
| 1210 | 99·46 | 3 | 89 57 33·4 | +11·344 | −0·374 | +0·045 | | 28754 | | | 4074 | | + 0 3401 | 1210 |
| 1211 | 98·81 | 3 | 88 8 37·4 | +11·330 | −0·370 | | | | 773 | 5285 | | | + 1 3131 | 1211 |
| 1212 | 02·49 | 3 | 71 32 58·9 | +11·196 | −0·332 | +0·083 | 2002 | 28823 | | | 4081 | 3986 | +18 3074 | 1212 |
| 1213 | 97·16 | 3 | 61 32 11·4 | +11·180 | −0·304 | | | 28843 | | | | | +28 2477 | 1213 |
| 1214 | 97·51 | 3 | 87 29 54·5 | +11·123 | −0·372 | +0·055 | 2003 | 28841 | 829 | 5299 | | | + 2 3007 | 1214 |
| 1215 | 98·18 | 7 | 85 13 16·9 | +11·080 | −0·367 | −0·059 | 2005 | 28854 | 842 | 5301 | 4089 | 3996 | + 4 3069 | 1215 |

1178. Authority for Proper Motions: Thackeray. 1181, 1210. Authority for Proper Motions: Porter.
1189, 1194. Authority for Proper Motions: Boss.

| No. | Constellation. | Magnitude. | Number of Estimations. | Mean Year and Fraction of Year. | Number of Observations. | Mean R.A. | Precess. | Sec. Var. | Proper Motion. | No. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | h. m. s. | s. | s. | s. | |
| 1216 | Serpentis ... ... R | Var. | 5 | 03·14 | 3 | 15 46 5·06 | +2·7648 | +0·0044 | −0·0030 | 1216 |
| 1217 | 41 Serpentis ... ... γ | 3·7 | 1 | 00·54 | 30 | 15 51 49·96 | +2·7480 | +0·0043 | +0·0194 | 1217 |
| 1218 | Serpentis ... ... ... | 8·9 | 2 | 02·63 | 3 | 15 52 14·41 | +2·9994 | +0·0068 | | 1218 |
| 1219 | Serpentis ... ... ... | 7·9 | 1 | 02·63 | 3 | 15 52 14·82 | +2·9995 | +0·0068 | | 1219 |
| 1220 | Serpentis ... ... ... | 7·1 | ... | 01·98 | 3 | 15 53 31·26 | +2·9723 | +0·0065 | | 1220 |
| 1221 | 7 Scorpii ... ... δ | 2·7 | ... | 01·76 | 7 | 15 54 25·07 | +3·5416 | +0·0158 | −0·0018 | 1221 |
| 1222 | Serpentis ... ... ... | 7·3 | 1 | 03·20 | 3 | 15 54 56·37 | +3·0547 | +0·0074 | | 1222 |
| 1223 | Coronae ... ... T | Var. | 3 | 98·78 | 3 | 15 55 18·93 | +2·5098 | +0·0031 | | 1223 |
| 1224 | Serpentis ... ... ... | 5·9 | ... | 97·17 | 3 | 15 55 53·19 | +2·9784 | +0·0065 | −0·0047 | 1224 |
| 1225 | Scorpii ... ... ... | 4·9 | ... | 98·44 | 3 | 15 57 17·85 | +3·6232 | +0·0173 | −0·0075 | 1225 |
| 1226 | Serpentis ... ... ... | 7·3 | 1 | 97·50 | 3 | 15 59 23·78 | +3·0536 | +0·0073 | | 1226 |
| 1227 | 8 Scorpii ... ... $\beta^1$ | 3·0 | ... | 00·50 | 30 | 15 59 37·23 | +3·4830 | +0·0141 | −0·0026 | 1227 |
| 1228 | Scorpii ... ... $\beta^2$ | 5·2 | ... | 02·87 | 3 | 15 59 37·63 | +3·4829 | +0·0141 | −0·0026 | 1228 |
| 1229 | Serpentis ... ... ... | 7·5 | ... | 00·77 | 5 | 16 1 10·99 | +3·0325 | +0·0070 | | 1229 |
| 1230 | Serpentis ... ... ... | 6·7 | 1 | 98·45 | 3 | 16 3 59·08 | +2·9967 | +0·0066 | | 1230 |
| 1231 | Serpentis ... ... ... | 6·8 | ... | 99·44 | 3 | 16 4 35·94 | +3·0506 | +0·0071 | | 1231 |
| 1232 | Serpentis ... ... ... | 6·6 | ... | 99·12 | 3 | 16 5 8·30 | +3·0346 | +0·0069 | | 1232 |
| 1233 | Serpentis ... ... ... | 7·5 | 1 | 02·46 | 3 | 16 8 3·41 | +3·0782 | +0·0074 | | 1233 |
| 1234 | Scorpii ... ... ... | 6·0 | ... | 98·44 | 3 | 16 8 49·62 | +3·6298 | +0·0160 | −0·0038 | 1234 |
| 1235 | 1 Ophiuchi ... ... δ | 3·1 | ... | 99·66 | 27 | 16 9 6·19 | +3·1438 | +0·0081 | −0·0049 | 1235 |
| 1236 | Serpentis ... ... ... | 7·1 | ... | 96·85 | 3 | 16 9 20·44 | +3·0127 | +0·0066 | | 1236 |
| 1237 | Serpentis ... ... ... | 7·2 | 2 | 96·51 | 3 | 16 12 39·46 | +3·0365 | +0·0068 | | 1237 |
| 1238 | 2 Ophiuchi ... ... ε | 3·3 | ... | 99·51 | 5 | 16 13 1·71 | +3·1656 | +0·0082 | +0·0040 | 1238 |
| 1239 | Scorpii ... ... ... | 6·2 | ... | 98·44 | 3 | 16 13 16·18 | +3·5069 | +0·0132 | | 1239 |
| 1240 | 50 Serpentis ... ... σ | 5·9 | 2 | 96·52 | 3 | 16 17 0·27 | +3·0462 | +0·0067 | −0·0131 | 1240 |
| 1241 | Serpentis ... ... ... | 7·0 | 1 | 98·24 | 4 | 16 17 13·92 | +3·0072 | +0·0063 | | 1241 |
| 1242 | 20 Herculis ... ... γ | 3·8 | ... | 00·10 | 19 | 16 17 30·46 | +2·6485 | +0·0039 | −0·0049 | 1242 |
| 1243 | Ophiuchi ... ... ... | 7·0 | 1 | 96·52 | 3 | 16 21 19·51 | +3·0147 | +0·0063 | | 1243 |
| 1244 | Ophiuchi ... ... ... | 7·0 | 1 | 97·48 | 3 | 16 21 47·78 | +3·0180 | +0·0063 | | 1244 |
| 1245 | Ophiuchi ... ... ... | 6·6 | ... | 98·83 | 3 | 16 22 31·22 | +3·0069 | +0·0062 | | 1245 |
| 1246 | 21 Scorpii ... ... α | 1·3 | ... | 99·81 | 9 | 16 23 16·39 | +3·6731 | +0·0149 | −0·0022 | 1246 |
| 1247 | Ophiuchi ... ... ... | 5·4 | ... | 96·83 | 3 | 16 23 28·15 | +3·0538 | +0·0066 | | 1247 |
| 1248 | Ophiuchi ... ... ... | 7·3 | 1 | 99·47 | 3 | 16 23 30·39 | +3·0342 | +0·0064 | | 1248 |
| 1249 | Ophiuchi ... ... ... | 7·0 | 1 | 99·47 | 3 | 16 23 35·66 | +3·0667 | +0·0067 | −0·0060 | 1249 |
| 1250 | Scorpii ... ... ... | 6·3 | 1 | 98·47 | 3 | 16 25 14·38 | +3·6782 | +0·0147 | −0·0043 | 1250 |
| 1251 | 10 Ophiuchi ... ... λ | 3·8 | ... | 98·56 | 10 | 16 25 52·09 | +3·0256 | +0·0062 | −0·0027 | 1251 |
| 1252 | 27 Herculis ... ... β | 2·9 | ... | 02·92 | 3 | 16 25 55·25 | +2·5847 | +0·0036 | −0·0090 | 1252 |
| 1253 | 23 Scorpii ... ... τ | 2·8 | ... | 98·48 | 4 | 16 29 39·22 | +3·7292 | +0·0149 | −0·0022 | 1253 |
| 1254 | Ophiuchi ... ... ... | 8·0* | ... | 03·16 | 3 | 16 30 59·79 | +3·0384 | +0·0062 | −0·0098 | 1254 |
| 1255 | 13 Ophiuchi ... ... ζ | 2·6 | ... | 98·97 | 23 | 16 31 39·02 | +3·2993 | +0·0087 | −0·0007 | 1255 |
| 1256 | Ophiuchi ... ... ... | 7·0 | ... | 99·13 | 3 | 16 32 1·22 | +3·0629 | +0·0063 | +0·0050 | 1256 |
| 1257 | 36 Herculis ... ... $m^1$ | 7·3 | 1 | 02·85 | 3 | 16 35 37·20 | +2·9767 | +0·0055 | −0·0018 | 1257 |
| 1258 | 37 Herculis ... ... $m^2$ | 6·3 | 1 | 96·52 | 3 | 16 35 40·73 | +2·9764 | +0·0055 | −0·0025 | 1258 |
| 1259 | Ophiuchi ... ... ... | 6·6 | ... | 97·85 | 3 | 16 36 12·30 | +3·0414 | +0·0060 | −0·0013 | 1259 |
| 1260 | 38 Herculis ... ... ... | 7·5 | 1 | 99·47 | 3 | 16 36 33·68 | +2·9620 | +0·0054 | −0·0004 | 1260 |

1216. 1902 May 23, mag. 8·8; 1902 June 2, mag. 9·3; 1903 June 22, mag. about 9·5; 1903 July 1, mag. 8·9; 1903 July 6, mag. about 8·5. The limits are 5·6 and 13; the period is 357 days. 1222. Reddish. 1223. 1898 June 20, mag. 9·7; 1898 June 22, mag. 9·3; 1899 May 29, mag. about 9. Chandler's limits are 2·0 and 9·5. This star is the Nova Coronae of 1866. 1227, 1228. The magnitudes of these stars in the Harvard Photometry (Annals, vol. xiv) should be interchanged. 1235. Red. 1240. Harvard magnitude, 4·8; B.D., 5·0. 1248. B.D. magnitude, 8·3; Albany, 7·4.

| No. | Mean Year and Fraction of Year. | Number of Observations. | Mean N.P.D. | Precess. | Sec. Var. | Proper Motion. | Auwers' Bradley, 1755. | Lalande, 1800. | Weisse's Bessel (I), 1825. | Albany (A.G.), 1875. | Radcliffe, 1890. | Greenwich, 1890. | B.D. | No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ° ′ ″ | ″ | ″ | ″ | | | | | | | ° | |
| 1216 | 03·14 | 3 | 74 33 45·9 | +11·061 | −0·341 | +0·050 | | | | | | | +15 2918 | 1216 |
| 1217 | 97·81 | 6 | 74 0 42·5 | +10·638 | −0·344 | +1·286 | 2023 | | | | 4123 | 4021 | +16 2849 | 1217 |
| 1218 | 02·63 | 3 | 86 18 11·4 | +10·608 | −0·376 | | | | 948 | 5322 | | | + 3 3104 | 1218 |
| 1219 | 02·63 | 3 | 86 18 20·0 | +10·608 | −0·376 | | | 29036 | 949 | 5323 | | | + 3 3104 | 1219 |
| 1220 | 01·98 | 3 | 84 57 30·2 | +10·513 | −0·374 | | | 29073 | 973 | | | | + 5 3117 | 1220 |
| 1221 | 02·90 | 3 | 112 20 12·1 | +10·446 | −0·445 | +0·028 | 2024 | 29072 | | | 4131 | 4029 | −22 4068 | 1221 |
| 1222 | 03·20 | 3 | 89 5 34·1 | +10·407 | −0·385 | | | 29106 | 996 | 5332 | | | + 1 3154 | 1222 |
| 1223 | 98·78 | 3 | 63 47 46·3 | +10·378 | −0·318 | | | | | | | | +26 2765 | 1223 |
| 1224 | 97·17 | 3 | 85 17 34·0 | +10·336 | −0·377 | −0·077 | 2031 | 29138 | 1015 | 5336 | | | + 4 3096 | 1224 |
| 1225 | 98·44 | 3 | 115 35 12·2 | +10·230 | −0·459 | +0·053 | | | | | | | | 1225 |
| 1226 | 97·50 | 3 | 89 3 3·5 | +10·072 | −0·389 | | | 29252 | 1080 | 5351 | | | + 1 3160 | 1226 |
| 1227 | 00·80 | 3 | 109 31 54·0 | +10·055 | −0·444 | +0·027 | 2034 | 29228 | | | 4155 | 4045 | −19 4307 | 1227 |
| 1228 | 02·00 | 3 | 109 31 42·0 | +10·054 | −0·444 | +0·027 | | 29231 | | | 4156 | 4046 | −19 4308 | 1228 |
| 1229 | 99·43 | 3 | 88 1 4·0 | + 9·936 | −0·388 | | | 29325 | 1122 | 5356 | | | + 2 3042 | 1229 |
| 1230 | 98·45 | 3 | 86 16 51·8 | + 9·723 | −0·386 | | | 29424 | | 5364 | | | + 3 3132 | 1230 |
| 1231 | 99·44 | 3 | 88 54 58·3 | + 9·675 | −0·394 | | | 29441 | 24 | 5368 | | | + 1 3168 | 1231 |
| 1232 | 99·45 | 4 | 88 8 6·5 | + 9·634 | −0·392 | | | 29457 | 40 | 5372 | | | + 1 3170 | 1232 |
| 1233 | 02·46 | 3 | 90 15 45·9 | + 9·409 | −0·401 | | | 29545 | | | 4198 | | − 0 3078 | 1233 |
| 1234 | 98·44 | 3 | 115 13 23·3 | + 9·350 | −0·472 | +0·013 | | | | | | 4085 | | 1234 |
| 1235 | 97·32 | 5 | 93 26 12·4 | + 9·329 | −0·410 | +0·137 | 2065 | 29573 | 116 | | 4209 | 4088 | − 3 3903 | 1235 |
| 1236 | 96·85 | 3 | 87 5 52·3 | + 9·310 | −0·393 | | | | 125 | 5387 | | | + 3 3151 | 1236 |
| 1237 | 96·51 | 3 | 88 15 26·5 | + 9·052 | −0·399 | | | 29687 | 190 | 5397 | | | + 1 3194 | 1237 |
| 1238 | 99·52 | 3 | 94 26 54·8 | + 9·023 | −0·416 | −0·034 | 2073 | 29691 | 193 | | 4226 | 4100 | − 4 4086 | 1238 |
| 1239 | 98·44 | 3 | 109 58 26·4 | + 9·004 | −0·461 | | | 29683 | | | 4228 | 4103 | −19 4357 | 1239 |
| 1240 | 96·52 | 3 | 88 44 9·7 | + 8·711 | −0·404 | −0·035 | 2081 | | | 5420 | | 4121 | + 1 3215 | 1240 |
| 1241 | 98·24 | 4 | 86 53 18·5 | + 8·693 | −0·399 | | | 29797 | 280 | 5424 | | | + 3 3173 | 1241 |
| 1242 | 99·11 | 8 | 70 36 43·5 | + 8·672 | −0·352 | −0·048 | 2084 | 29830 | | | 4244 | 4123 | +19 3086 | 1242 |
| 1243 | 96·52 | 3 | 87 15 57·0 | + 8·369 | −0·403 | | | 29915 | 358 | 5448 | | | + 2 3103 | 1243 |
| 1244 | 97·48 | 3 | 87 25 32·5 | + 8·332 | −0·404 | | | 29929 | 367 | 5451 | | | + 2 3106 | 1244 |
| 1245 | 98·83 | 3 | 86 54 17·2 | + 8·274 | −0·403 | | | 29959 | 383 | 5453 | | | + 3 3199 | 1245 |
| 1246 | 98·87 | 3 | 116 12 36·2 | + 8·214 | −0·492 | +0·028 | 2091 | 29943 | | | 4273 | 4149 | | 1246 |
| 1247 | 96·83 | 3 | 89 6 39·1 | + 8·198 | −0·410 | | | | 394 | 5457 | | | + 0 3529 | 1247 |
| 1248 | 99·47 | 3 | 88 11 27·8 | + 8·195 | −0·407 | | | | 395 | 5458 | | | + 1 3239 | 1248 |
| 1249 | 99·47 | 3 | 89 43 14·5 | + 8·188 | −0·412 | +0·100 | | 29981 | 397 | | 4275 | | + 0 3530 | 1249 |
| 1250 | 98·47 | 3 | 116 19 11·1 | + 8·057 | −0·495 | +0·016 | | | | | | 4153 | | 1250 |
| 1251 | 98·81 | 3 | 87 47 50·3 | + 8·006 | −0·408 | +0·065 | 2097 | 30048 | 440 | 5473 | 4287 | 4159 | + 2 3118 | 1251 |
| 1252 | 02·83 | 6 | 68 17 33·6 | + 8·002 | −0·349 | +0·015 | 2100 | 30062 | | | 4288 | 4161 | +21 2934 | 1252 |
| 1253 | 98·48 | 4 | 118 0 28·8 | + 7·702 | −0·506 | +0·023 | 2103 | | | | 4307 | 4174 | | 1253 |
| 1254 | 03·16 | 3 | 88 24 40·1 | + 7·593 | −0·413 | +0·095 | | 30193 | | 5496 | | | + 1 3263 | 1254 |
| 1255 | 98·93 | 7 | 100 21 51·9 | + 7·540 | −0·449 | −0·035 | 2109 | 30198 | 546 | | 4312 | 4181 | −10 4350 | 1255 |
| 1256 | 99·13 | 3 | 89 32 41·6 | + 7·510 | −0·417 | −0·040 | | | 560 | | | | + 0 3553 | 1256 |
| 1257 | 02·85 | 3 | 85 35 51·0 | + 7·217 | −0·408 | −0·003 | 2116 | 30335 | 642 | 5516 | | | + 4 3234 | 1257 |
| 1258 | 96·52 | 3 | 85 35 6·8 | + 7·212 | −0·408 | +0·010 | 2117 | 30339 | 643 | 5517 | | | + 4 3235 | 1258 |
| 1259 | 97·85 | 3 | 88 33 39·1 | + 7·169 | −0·417 | +0·040 | 2119 | 30351 | 655 | 5520 | | | + 1 3286 | 1259 |
| 1260 | 99·47 | 3 | 84 56 5·4 | + 7·140 | −0·407 | −0·013 | 2121 | 30374 | 665 | 5523 | | | + 5 3254 | 1260 |

1216. Authority for Proper Motions: Auwers (Berlin A). 1225, 1234, 1250. Authority for Proper Motions: Auwers (Mayer's Sternverzeichnis). 1228. Authority for Proper Motions: Radcliffe, 1890, 4156. 1249. Authority for Proper Motions: Radcliffe, 1890, 4275. 1254. Authority for Proper Motions: Porter. 1256. The Proper Motions have been specially computed for the present catalogue.

| No. | Constellation. | Magnitude. | Number of Estimations. | Mean Year and Fraction of Year. | Number of Observations. | Mean R.A. | Precess. | Sec. Var. | Proper Motion. | No. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | h. m. s. | s. | s. | s. | |
| 1261 | 14 Ophiuchi ... ... ... | 6·2 | 2 | 99·47 | 3 | 16 36 38·48 | +3·0428 | +0·0060 | −0·0096 | 1261 |
| 1262 | 40 Herculis ... ... ζ | 2·9 | ... | 00·83 | 7 | 16 37 30·97 | +2·2975 | +0·0033 | −0·0356 | 1262 |
| 1263 | Ophiuchi ... ... ... | 7·8* | ... | 99·15 | 3 | 16 38 3·43 | +2·9930 | +0·0056 | | 1263 |
| 1264 | 41 Herculis ... ... ... | 6·7 | 1 | 96·52 | 3 | 16 40 7·67 | +2·9344 | +0·0051 | −0·0157 | 1264 |
| 1265 | 16 Ophiuchi ... ... ... | 6·0 | ... | 96·89 | 3 | 16 40 24·71 | +3·0463 | +0·0059 | +0·0007 | 1265 |
| 1266 | Ophiuchi ... ... ... | 7·1 | ... | 02·55 | 3 | 16 40 59·72 | +2·9798 | +0·0054 | | 1266 |
| 1267 | Ophiuchi ... ... ... | 7·3 | 1 | 98·49 | 3 | 16 41 51·00 | +3·0194 | +0·0056 | −0·0104 | 1267 |
| 1268 | 19 Ophiuchi ... ... ... | 7·0 | 1 | 97·22 | 3 | 16 42 7·12 | +3·0233 | +0·0056 | −0·0030 | 1268 |
| 1269 | Ophiuchi ... ... ... | 7·3 | 1 | 97·82 | 3 | 16 43 9·06 | +3·0448 | +0·0057 | | 1269 |
| 1270 | 21 Ophiuchi ... ... ... | 5·5 | ... | 97·49 | 3 | 16 46 20·60 | +3·0420 | +0·0056 | −0·0009 | 1270 |
| 1271 | Ophiuchi ... ... ... | 6·8 | ... | 99·13 | 3 | 16 47 56·31 | +3·0687 | +0·0057 | −0·0477 | 1271 |
| 1272 | Ophiuchi ... ... ... | 7·3 | 1 | 96·52 | 3 | 16 49 15·24 | +2·8802 | +0·0045 | | 1272 |
| 1273 | Ophiuchi ... ... ... | 8·0* | ... | 02·76 | 3 | 16 51 1·53 | +3·0375 | +0·0054 | | 1273 |
| 1274 | 27 Ophiuchi ... ... κ | 3·5 | ... | 99·26 | 19 | 16 52 56·02 | +2·8578 | +0·0043 | −0·0212 | 1274 |
| 1275 | Ophiuchi ... ... ... | 8·5* | ... | 02·85 | 3 | 16 53 52·04 | +2·9804 | +0·0049 | | 1275 |
| 1276 | 22 Ursae Minoris ... ε | 4·4 | ... | 03·06 | 3 | 16 56 12·25 | −6·3133 | +0·3156 | +0·0090 | 1276 |
| 1277 | 58 Herculis ... ... ε | 3·8 | ... | 98·47 | 8 | 16 56 27·76 | +2·2980 | +0·0032 | −0·0047 | 1277 |
| 1278 | Ophiuchi ... ... ... | 7·0 | 1 | 98·50 | 3 | 16 58 34·03 | +3·0728 | +0·0052 | | 1278 |
| 1279 | Ophiuchi ... ... ... | 6·0 | 1 | 96·52 | 3 | 17 0 11·27 | +3·0536 | +0·0050 | 0·0000 | 1279 |
| 1280 | Ophiuchi ... ... ... | 6·3 | ... | 98·18 | 3 | 17 0 13·49 | +3·5795 | +0·0089 | −0·0048 | 1280 |
| 1281 | Ophiuchi ... ... ... | 7·2 | ... | 96·55 | 3 | 17 0 23·84 | +2·9920 | +0·0047 | | 1281 |
| 1282 | Herculis ... ... ... | 6·3 | ... | 97·51 | 3 | 17 2 2·01 | +1·8251 | +0·0042 | | 1282 |
| 1283 | Ophiuchi ... ... ... | 7·2 | ... | 01·56 | 3 | 17 3 24·57 | +2·9693 | +0·0045 | −0·0050 | 1283 |
| 1284 | 35 Ophiuchi ... ... η | 2·6 | ... | 00·20 | 14 | 17 4 38·50 | +3·4351 | +0·0072 | +0·0003 | 1284 |
| 1285 | Ophiuchi ... ... ... | 6·9 | ... | 99·50 | 3 | 17 5 9·41 | +3·0589 | +0·0048 | | 1285 |
| 1286 | Ophiuchi ... ... ... | 6·1 | ... | 98·52 | 3 | 17 6 9·26 | +3·7535 | +0·0098 | | 1286 |
| 1287 | Ophiuchi ... ... ... | 6·8 | 1 | 97·54 | 3 | 17 6 26·37 | +2·9632 | +0·0043 | | 1287 |
| 1288 | Ophiuchi ... ... ... | 6·5 | ... | 98·83 | 3 | 17 7 47·76 | +3·0619 | +0·0047 | | 1288 |
| 1289 | 22 Draconis ... ... ζ | 3·2 | ... | 02·74 | 3 | 17 8 29·74 | +0·1679 | +0·0192 | −0·0027 | 1289 |
| 1290 | 64 Herculis ... ... $a^1$ | Var. | ... | 00·39 | 16 | 17 10 5·17 | +2·7351 | +0·0035 | −0·0019 | 1290 |
| 1291 | Ophiuchi ... ... ... | 6·7 | 1 | 96·53 | 3 | 17 11 11·84 | +3·0203 | +0·0044 | | 1291 |
| 1292 | Ophiuchi ... ... U | Var. | ... | 96·89 | 3 | 17 11 27·18 | +3·0426 | +0·0044 | | 1292 |
| 1293 | Ophiuchi ... ... ... | 6·6 | 1 | 99·49 | 3 | 17 12 33·81 | +3·0305 | +0·0043 | | 1293 |
| 1294 | Ophiuchi ... ... ... | 6·8 | ... | 00·59 | 3 | 17 13 5·01 | +2·9983 | +0·0042 | | 1294 |
| 1295 | Herculis ... ... ... | Neb. | ... | 99·19 | 3 | 17 14 3·28 | +1·8406 | +0·0039 | | 1295 |
| 1296 | Ophiuchi ... ... ... | 6·9 | 2 | 99·50 | 3 | 17 14 43·90 | +3·0214 | +0·0042 | | 1296 |
| 1297 | Ophiuchi ... ... ... | 8·1* | ... | 01·59 | 3 | 17 14 52·24 | +3·0778 | +0·0044 | | 1297 |
| 1298 | 42 Ophiuchi ... ... θ | 3·3 | ... | 99·88 | 11 | 17 15 51·99 | +3·6818 | +0·0078 | −0·0024 | 1298 |
| 1299 | Ophiuchi ... ... ... | 7·0 | ... | 98·91 | 3 | 17 16 4·09 | +3·0375 | +0·0042 | −0·0100 | 1299 |
| 1300 | Ophiuchi ... ... ... | 7·4 | ... | 98·88 | 3 | 17 16 5·75 | +2·9644 | +0·0039 | | 1300 |
| 1301 | Ophiuchi ... ... ... | 7·0 | 1 | 99·19 | 3 | 17 17 8·16 | +2·9555 | +0·0039 | | 1301 |
| 1302 | Ophiuchi ... ... ... | 7·3 | 1 | 99·52 | 3 | 17 17 56·67 | +3·0512 | +0·0042 | | 1302 |
| 1303 | Ophiuchi ... ... ... | 7·4 | ... | 99·64 | 3 | 17 20 30·06 | +2·9945 | +0·0038 | | 1303 |
| 1304 | Ophiuchi ... ... ... | 6·3 | ... | 96·88 | 3 | 17 20 43·82 | +3·7111 | +0·0073 | | 1304 |
| 1305 | Ophiuchi ... ... ... | 8·0* | ... | 01·57 | 3 | 17 20 46·71 | +3·0214 | +0·0039 | −0·0404 | 1305 |

1268. Harvard magnitude, 6·0; B.D., 6·6. 1274. Orange-red. 1290. Red. The limits of magnitude are 3·1 and 3·9; the period is irregular. The companion follows south, and is blue. 1292. The limits of magnitude are 6·0 and 6·7; the period is 20 hours. 1295. A faint nebula with two or more nuclei. Difficult to observe.

| No. | Mean Year and Fraction of Year. | Number of Observations. | Mean N.P.D. | Precess. | Sec. Var. | Proper Motion. | Auwers' Bradley, 1755. | Lalande, 1800. | Weisse's Bessel (1), 1825. | Albany (A.G.), 1875. | Radcliffe, 1890. | Greenwich, 1890. | B.D. | No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ° ′ ″ | ″ | ″ | ″ | | | | | | | ° | |
| 1261 | 99·47 | 3 | 88 37 40·5 | +7·134 | −0·418 | −0·025 | 2120 | 30373 | 664 | 5524 | | | + 1 3290 | 1261 |
| 1262 | 01·87 | 3 | 58 12 58·3 | +7·062 | −0·317 | −0·410 | 2127 | 30433 | | | 4344 | 4195 | +31 2884 | 1262 |
| 1263 | 99·15 | 3 | 86 21 23·1 | +7·018 | −0·412 | | | 30416 | 689 | 5533 | | | + 3 3254 | 1263 |
| 1264 | 96·52 | 3 | 83 43 12·4 | +6·848 | −0·405 | +0·274 | 2130 | 30480 | 731 | | | | + 6 3288 | 1264 |
| 1265 | 96·89 | 3 | 88 47 46·2 | +6·824 | −0·421 | −0·009 | 2129 | 30483 | 734 | 5541 | | | + 1 3298 | 1265 |
| 1266 | 02·55 | 3 | 85 46 30·9 | +6·776 | −0·412 | | | 30501 | 745 | 5545 | | | + 4 3250 | 1266 |
| 1267 | 98·49 | 3 | 87 34 40·4 | +6·706 | −0·418 | −0·060 | 2134 | 30527 | | 5551 | | | + 2 3174 | 1267 |
| 1268 | 97·22 | 3 | 87 45 18·8 | +6·684 | −0·419 | +0·015 | 2135 | 30535 | | 5553 | | 4207 | + 2 3175 | 1268 |
| 1269 | 97·82 | 3 | 88 43 53·7 | +6·599 | −0·422 | | | | 780 | 5559 | | | + 1 3309 | 1269 |
| 1270 | 97·49 | 3 | 88 36 48·9 | +6·334 | −0·424 | +0·002 | 2140 | 30656 | 848 | 5575 | | | + 1 3323 | 1270 |
| 1271 | 99·13 | 3 | 89 49 7·8 | +6·201 | −0·428 | +1·490 | | 30694 | 873 | | 4385 | | + 0 3593 | 1271 |
| 1272 | 96·52 | 3 | 81 24 12·3 | +6·092 | −0·403 | | | 30748 | | | | | + 8 3298 | 1272 |
| 1273 | 02·76 | 3 | 88 25 9·6 | +5·944 | −0·426 | | | 30790 | 925 | 5586 | | | + 1 3346 | 1273 |
| 1274 | 97·81 | 8 | 80 28 10·1 | +5·785 | −0·402 | −0·015 | 2156 | 30861 | | | 4409 | 4242 | + 9 3298 | 1274 |
| 1275 | 02·85 | 3 | 85 52 50·3 | +5·706 | −0·419 | | | 30875 | 977 | 5597 | | | + 4 3301 | 1275 |
| 1276 | 02·81 | 6 | 7 47 52·5 | +5·510 | +0·883 | +0·003 | 2201 | | | | 4430 | 4262 | +82 498 | 1276 |
| 1277 | 01·76 | 3 | 58 55 34·9 | +5·488 | −0·325 | −0·032 | 2161 | 30996 | | | 4425 | 4257 | +31 2947 | 1277 |
| 1278 | 98·50 | 3 | 90 0 14·5 | +5·311 | −0·434 | | | 31022 | 1062 | | 4434 | | + 0 3624 | 1278 |
| 1279 | 96·52 | 3 | 89 9 1·4 | +5·174 | −0·432 | +0·360 | | 31065 | 1089 | 5634 | | | + 0 3629 | 1279 |
| 1280 | 95·55 | 3 | 111 25 33·4 | +5·171 | −0·507 | +0·098 | 2162 | 31046 | | | 4445 | 4276 | −21 4512 | 1280 |
| 1281 | 96·55 | 3 | 86 25 26·7 | +5·156 | −0·424 | | | | 1099 | 5638 | | | + 3 3338 | 1281 |
| 1282 | 97·51 | 3 | 46 3 7·2 | +5·018 | −0·260 | | | 31192 | | | | | +44 2652 | 1282 |
| 1283 | 01·56 | 3 | 85 26 21·7 | +4·901 | −0·422 | +0·203 | | 31173 | 1160 | 5663 | | | + 4 3336 | 1283 |
| 1284 | 01·57 | 3 | 105 36 4·3 | +4·797 | −0·488 | −0·097 | 2171 | 31191 | | | 4464 | 4287 | −15 4467 | 1284 |
| 1285 | 99·50 | 3 | 89 23 33·4 | +4·753 | −0·435 | | | 31231 | 26 | | | | + 0 3649 | 1285 |
| 1286 | 98·52 | 3 | 117 38 19·9 | +4·668 | −0·534 | | | 31226 | | | | 4292 | | 1286 |
| 1287 | 97·54 | 3 | 85 11 11·2 | +4·643 | −0·422 | | | 31272 | 51 | 5682 | | | + 4 3349 | 1287 |
| 1288 | 98·83 | 3 | 89 31 33·6 | +4·528 | −0·437 | | | | 79 | | | 4299 | + 0 3654 | 1288 |
| 1289 | 02·85 | 6 | 24 9 44·3 | +4·469 | −0·026 | −0·022 | 2193 | 31445 | | | 4480 | 4302 | +65 1170 | 1289 |
| 1290 | 99·59 | 4 | 75 29 44·0 | +4·333 | −0·391 | −0·030 | 2183 | 31365 | 125 | | 4486 | 4307 | +14 3207 | 1290 |
| 1291 | 96·53 | 3 | 87 42 6·0 | +4·238 | −0·432 | | | 31384 | | 5708 | | 4312 | + 2 3283 | 1291 |
| 1292 | 96·89 | 3 | 88 40 40·1 | +4·216 | −0·436 | | | 31392 | 143 | 5710 | | | + 1 3408 | 1292 |
| 1293 | 99·49 | 3 | 88 8 55·9 | +4·121 | −0·434 | | | 31422 | 170 | 5718 | | 4323 | + 1 3411 | 1293 |
| 1294 | 00·59 | 3 | 86 44 48·9 | +4·076 | −0·430 | | | 31440 | | 5721 | | | + 3 3379 | 1294 |
| 1295 | 99·19 | 3 | 46 45 23·3 | +3·993 | −0·265 | | | 31544 | | | | 4327 | +43 2711 | 1295 |
| 1296 | 99·50 | 3 | 87 45 27·9 | +3·935 | −0·434 | | | 31494 | 209 | 5732 | | 4328 | + 2 3296 | 1296 |
| 1297 | 01·59 | 3 | 90 13 19·7 | +3·923 | −0·442 | | | 31496 | | | | | − 0 3265 | 1297 |
| 1298 | 01·77 | 3 | 114 53 58·5 | +3·838 | −0·529 | +0·035 | 2189 | 31495 | | | 4517 | 4336 | | 1298 |
| 1299 | 98·91 | 3 | 88 27 51·9 | +3·820 | −0·437 | −0·260 | | 31546 | 237 | 5738 | | | + 1 3421 | 1299 |
| 1300 | 98·88 | 3 | 85 16 48·3 | +3·818 | −0·426 | | | 31569 | | 5739 | | | + 4 3398 | 1300 |
| 1301 | 99·19 | 3 | 84 53 59·1 | +3·728 | −0·425 | | | 31588 | | 5750 | | | + 5 3378 | 1301 |
| 1302 | 99·52 | 3 | 89 3 51·4 | +3·659 | −0·439 | | | | 271 | 5756 | | | + 0 3678 | 1302 |
| 1303 | 99·64 | 3 | 86 35 58·2 | +3·439 | −0·432 | | | | 315 | 5764 | | | + 3 3404 | 1303 |
| 1304 | 96·82 | 4 | 115 51 18·3 | +3·419 | −0·535 | | | 31671 | | | | 4348 | | 1304 |
| 1305 | 01·57 | 3 | 87 45 59·9 | +3·415 | −0·435 | +1·156 | | | 322 | 5766 | | | + 2 3312 | 1305 |

1264, 1271, 1279, 1283. Authority for Proper Motions: Bossert. 1299. Authority for Proper Motions: Porter.
1305. Authority for Proper Motions: Boss.

| No. | Constellation. | Magnitude. | Number of Estimations. | Mean Year and Fraction of Year. | Number of Observations. | Mean R.A. | Precess. | Sec. Var. | Proper Motion. | No. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | h. m. s. | s. | s. | s. | |
| 1306 | Ophiuchi ... ... ... | 7·0 | ... | 99·51 | 3 | 17 21 26·15 | +3·0518 | +0·0040 | | 1306 |
| 1307 | 49 Ophiuchi ... ... σ | 4·4 | ... | 99·74 | 15 | 17 21 33·11 | +2·9753 | +0·0037 | −0·0017 | 1307 |
| 1308 | Ophiuchi ... ... ... | 5·1 | ... | 98·54 | 3 | 17 23 43·55 | +3·0633 | +0·0039 | | 1308 |
| 1309 | Ophiuchi ... ... ... | 6·0 | ... | 97·84 | 3 | 17 25 31·71 | +3·7229 | +0·0067 | −0·0020 | 1309 |
| 1310 | Ophiuchi ... ... ... | 7·1 | ... | 98·52 | 3 | 17 25 46·75 | +3·0451 | +0·0037 | | 1310 |
| 1311 | Ophiuchi ... ... ... | 5·8 | 1 | 99·25 | 3 | 17 26 20·45 | +3·0080 | +0·0036 | | 1311 |
| 1312 | Ophiuchi ... ... ... | 7·2 | ... | 99·59 | 3 | 17 26 27·42 | +3·0324 | +0·0037 | | 1312 |
| 1313 | 76 Herculis ... ... λ | 4·7 | ... | 02·55 | 4 | 17 26 41·77 | +2·4223 | +0·0028 | −0·0002 | 1313 |
| 1314 | Ophiuchi ... ... ... | 7·0 | 1 | 00·51 | 4 | 17 26 50·41 | +3·0700 | +0·0037 | | 1314 |
| 1315 | Ophiuchi ... ... ... | 7·7 | 1 | 99·55 | 3 | 17 27 2·08 | +3·0058 | +0·0036 | | 1315 |
| 1316 | Herculis ... ... ... | 6·5 | ... | 97·56 | 3 | 17 27 19·80 | +2·0028 | +0·0031 | | 1316 |
| 1317 | Ophiuchi ... ... ... | 9·5 | 2 | 99·59 | 3 | 17 28 3·55 | +3·0037 | +0·0035 | | 1317 |
| 1318 | Ophiuchi ... ... ... | 8·0* | ... | 99·64 | 3 | 17 29 40·78 | +2·9762 | +0·0034 | | 1318 |
| 1319 | 55 Ophiuchi ... ... α | 2·1 | ... | 99·68 | 14 | 17 30 17·45 | +2·7756 | +0·0030 | +0·0066 | 1319 |
| 1320 | Ophiuchi ... ... ... | 8·3 | 1 | 00·61 | 3 | 17 30 45·40 | +3·0482 | +0·0035 | | 1320 |
| 1321 | Ophiuchi ... ... ... | 8·6 | 1 | 00·61 | 3 | 17 30 45·57 | +3·0482 | +0·0035 | | 1321 |
| 1322 | Ophiuchi ... ... ... | 6·3 | 1 | 96·58 | 3 | 17 34 5·57 | +3·0243 | +0·0033 | | 1322 |
| 1323 | Ophiuchi ... ... ... | 7·0 | 1 | 97·91 | 3 | 17 34 19·01 | +2·9888 | +0·0032 | −0·0129 | 1323 |
| 1324 | Ophiuchi ... ... ... | 6·8 | ... | 98·59 | 3 | 17 34 31·70 | +2·9926 | +0·0032 | | 1324 |
| 1325 | Ophiuchi ... ... ... | 7·0 | 1 | 99·51 | 3 | 17 36 58·60 | +2·9700 | +0·0030 | | 1325 |
| 1326 | Draconis ... ... ... | 7·7* | ... | 99·58 | 3 | 17 37 0·53 | −0·3118 | +0·0138 | | 1326 |
| 1327 | 28 Draconis ... ... ω | 4·9 | ... | 99·61 | 3 | 17 37 32·21 | −0·3580 | +0·0139 | +0·0024 | 1327 |
| 1328 | 60 Ophiuchi ... ... β | 3·0 | ... | 00·23 | 19 | 17 38 31·91 | +2·9654 | +0·0030 | −0·0041 | 1328 |
| 1329 | Ophiuchi ... ... ... | 8·0 | 1 | 99·62 | 3 | 17 39 3·53 | +3·0634 | +0·0031 | | 1329 |
| 1330 | 61 Ophiuchi ... ... ... | 6·3 | 1 | 99·52 | 3 | 17 39 32·68 | +3·0117 | +0·0030 | −0·0005 | 1330 |
| 1331 | Ophiuchi ... ... ... | 6·6 | 1 | 99·52 | 3 | 17 39 34·00 | +3·0117 | +0·0030 | | 1331 |
| 1332 | Ophiuchi ... ... ... | 6·3 | 1 | 96·89 | 3 | 17 41 19·91 | +3·0475 | +0·0029 | | 1332 |
| 1333 | 86 Herculis ... ... μ | 3·7 | 1 | 99·55 | 12 | 17 42 32·60 | +2·3706 | +0·0025 | −0·0244 | 1333 |
| 1334 | 62 Ophiuchi ... ... γ | 3·7 | ... | 97·23 | 3 | 17 42 52·61 | +3·0088 | +0·0028 | −0·0037 | 1334 |
| 1335 | Ophiuchi ... ... ... | 6·2 | ... | 97·93 | 3 | 17 43 21·63 | +2·9833 | +0·0027 | | 1335 |
| 1336 | Ophiuchi ... ... ... | 7·2 | ... | 98·56 | 3 | 17 44 2·10 | +2·9560 | +0·0027 | | 1336 |
| 1337 | Ophiuchi ... ... ... | 6·3 | 1 | 98·91 | 3 | 17 44 16·29 | +3·0263 | +0·0027 | −0·0030 | 1337 |
| 1338 | Ophiuchi ... ... ... | 7·9 | ... | 99·21 | 3 | 17 44 28·62 | +3·0509 | +0·0028 | | 1338 |
| 1339 | Ophiuchi ... ... ... | 7·0 | 1 | 99·60 | 3 | 17 46 9·71 | +2·9500 | +0·0026 | | 1339 |
| 1340 | Ophiuchi ... ... ... | 7·1 | 3 | 98·26 | 3 | 17 46 55·81 | +3·0465 | +0·0026 | | 1340 |
| 1341 | Ophiuchi ... ... ... | 6·4 | 3 | 97·57 | 3 | 17 47 0·41 | +3·0463 | +0·0026 | | 1341 |
| 1342 | Ophiuchi ... ... ... | 6·5 | 2 | 99·53 | 3 | 17 47 3·17 | +2·9674 | +0·0026 | | 1342 |
| 1343 | Ophiuchi ... ... ... | 6·0 | 1 | 97·26 | 3 | 17 47 31·33 | +3·0417 | +0·0026 | | 1343 |
| 1344 | Ophiuchi ... ... ... | 7·4 | ... | 99·55 | 3 | 17 48 18·01 | +3·0100 | +0·0025 | | 1344 |
| 1345 | Ophiuchi ... ... ... | 7·0 | 1 | 99·22 | 3 | 17 49 29·60 | +2·9851 | +0·0025 | | 1345 |
| 1346 | Sagittarii ... ... ... | 5·7 | ... | 97·55 | 3 | 17 50 22·87 | +3·7844 | +0·0031 | | 1346 |
| 1347 | Ophiuchi ... ... ... | 6·7 | ... | 97·57 | 3 | 17 50 35·00 | +3·0239 | +0·0024 | | 1347 |
| 1348 | Ophiuchi ... ... ... | 5·7 | ... | 98·95 | 3 | 17 51 12·62 | +3·0567 | +0·0024 | | 1348 |
| 1349 | 89 Herculis ... ... ... | 5·7 | 1 | 99·67 | 13 | 17 51 23·10 | +2·4193 | +0·0024 | +0·0003 | 1349 |
| 1350 | Ophiuchi ... ... ... | 6·1 | ... | 99·54 | 3 | 17 51 56·89 | +3·0708 | +0·0024 | | 1350 |

1320, 1321. 1899 August 19, Second star slightly fainter than first; 1902 July 28, Second star slightly brighter than first.
1324. Orange. 1328, 1333. Orange-red. 1340. Blue. 1341. Light orange.

| No. | Mean Year and Fraction of Year. | Number of Observations. | Mean N.P.D. | Precess. | Sec. Var. | Proper Motion. | Auwers' Bradley, 1755. | Lalande, 1800. | Weisse's Bessel (1), 1825. | Albany (A. G.), 1875. | Radcliffe, 1890. | Greenwich, 1890. | B.D. | No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ° ′ ″ | ″ | ″ | ″ | | | | | | | ° | |
| 1306 | 99·51 | 3 | 89 5 25·9 | +3·358 | −0·440 | | | 31734 | 335 | 5771 | | | + 0 3690 | 1306 |
| 1307 | 98·99 | 7 | 85 46 21·4 | +3·348 | −0·429 | −0·015 | 2206 | | | 5773 | 4546 | 4354 | + 4 3422 | 1307 |
| 1308 | 98·54 | 3 | 89 35 17·0 | +3·161 | −0·442 | | | 31804 | 376 | | | 4357 | + 0 3697 | 1308 |
| 1309 | 97·84 | 3 | 116 11 34·7 | +3·005 | −0·538 | +0·034 | 3248 | 31832 | | | | 4362 | | 1309 |
| 1310 | 98·52 | 3 | 88 48 10·2 | +2·983 | −0·440 | | | 31877 | | 5801 | | | + 1 3449 | 1310 |
| 1311 | 99·25 | 3 | 87 12 2·0 | +2·934 | −0·435 | | | 31898 | | 5807 | | | + 2 3337 | 1311 |
| 1312 | 99·59 | 3 | 88 15 7·6 | +2·924 | −0·439 | | | 31905 | 443 | 5808 | | | + 1 3450 | 1312 |
| 1313 | 02·52 | 4 | 63 48 50·4 | +2·904 | −0·351 | −0·022 | 2213 | 31950 | | | | 4364 | +26 3034 | 1313 |
| 1314 | 99·52 | 3 | 89 52 59·1 | +2·891 | −0·444 | | | 31900 | 446 | | 4562 | | + 0 3709 | 1314 |
| 1315 | 99·55 | 3 | 87 6 7·2 | +2·874 | −0·435 | | | 31924 | | 5815 | | | + 2 3341 | 1315 |
| 1316 | 97·56 | 3 | 51 2 34·9 | +2·849 | −0·290 | | | 31990 | | | | 4365 | +39 3147 | 1316 |
| 1317 | 99·59 | 3 | 87 0 53·7 | +2·785 | −0·435 | | | | 474 | 5821 | | | + 3 3440 | 1317 |
| 1318 | 99·64 | 3 | 85 49 59·7 | +2·645 | −0·431 | | | 32016 | 509 | 5831 | | | + 4 3448 | 1318 |
| 1319 | 00·38 | 3 | 77 22 1·9 | +2·592 | −0·402 | +0·217 | 2218 | 32049 | 532 | | 4580 | 4369 | +12 3252 | 1319 |
| 1320 | 00·61 | 3 | 88 56 18·2 | +2·552 | −0·442 | | | | 529 | 5842 | | | + 1 3463 | 1320 |
| 1321 | 00·61 | 3 | 88 56 17·8 | +2·551 | −0·442 | | | | 529 | 5843 | | | + 1 3463 | 1321 |
| 1322 | 96·58 | 3 | 87 54 52·5 | +2·262 | −0·439 | | | 32176 | 619 | 5863 | | 4382 | + 2 3373 | 1322 |
| 1323 | 97·91 | 3 | 86 23 8·4 | +2·242 | −0·434 | +0·096 | | 32204 | | 5866 | | | + 3 3465 | 1323 |
| 1324 | 98·59 | 3 | 86 33 1·4 | +2·224 | −0·435 | | | 32206 | | 5868 | | | + 3 3466 | 1324 |
| 1325 | 99·51 | 3 | 85 34 59·0 | +2·011 | −0·432 | | | 32288 | 673 | 5884 | | | + 4 3482 | 1325 |
| 1326 | 99·58 | 3 | 21 27 15·2 | +2·008 | +0·045 | | | 32482 | | | | | +68 945 | 1326 |
| 1327 | 00·76 | 8 | 21 11 44·5 | +1·962 | +0·051 | −0·308 | 2238 | 32502 | | | 4611 | 4402 | +68 949 | 1327 |
| 1328 | 98·27 | 10 | 85 23 27·7 | +1·876 | −0·431 | −0·167 | 2229 | 32346 | 705 | 5892 | 4618 | 4404 | + 4 3489 | 1328 |
| 1329 | 99·62 | 3 | 89 35 59·8 | +1·830 | −0·446 | | | | 715 | | | | + 0 3763 | 1329 |
| 1330 | 99·52 | 3 | 87 22 38·6 | +1·787 | −0·438 | −0·016 | 2231 | 32378 | 729 | 5896 | | | + 2 3390 | 1330 |
| 1331 | 99·52 | 3 | 87 22 39·8 | +1·785 | −0·438 | | | 32380 | 730 | 5897 | | | + 2 3391 | 1331 |
| 1332 | 96·89 | 3 | 88 54 59·4 | +1·631 | −0·444 | | | 32438 | 769 | 5911 | | | + 1 3501 | 1332 |
| 1333 | 98·73 | 3 | 62 13 14·9 | +1·526 | −0·345 | +0·745 | 2237 | 32519 | | | 4635 | 4410 | +27 2888 | 1333 |
| 1334 | 97·23 | 3 | 87 15 18·3 | +1·497 | −0·438 | +0·056 | 2236 | 32494 | 805 | 5925 | | 4413 | + 2 3403 | 1334 |
| 1335 | 97·93 | 3 | 86 9 41·3 | +1·455 | −0·434 | | | 32514 | 815 | 5932 | | | + 3 3493 | 1335 |
| 1336 | 98·56 | 3 | 84 59 54·7 | +1·396 | −0·431 | | | 32545 | 827 | 5938 | | | + 5 3505 | 1336 |
| 1337 | 98·91 | 3 | 88 0 30·8 | +1·375 | −0·441 | −0·080 | | 32553 | 832 | 5940 | | | + 2 3406 | 1337 |
| 1338 | 99·21 | 3 | 89 3 43·4 | +1·357 | −0·444 | | | | | 5941 | | | + 0 3786 | 1338 |
| 1339 | 99·60 | 3 | 84 44 37·5 | +1·210 | −0·430 | | | | 873 | | | | + 5 3521 | 1339 |
| 1340 | 98·26 | 3 | 88 52 31·0 | +1·143 | −0·444 | | | 32644 | 886 | 5960 | | | + 1 3525 | 1340 |
| 1341 | 97·57 | 3 | 88 51 47·1 | +1·136 | −0·444 | | | 32649 | 892 | 5962 | | | + 1 3526 | 1341 |
| 1342 | 99·53 | 3 | 85 29 13·7 | +1·132 | −0·433 | | | 32662 | 901 | 5964 | | | + 4 3541 | 1342 |
| 1343 | 97·26 | 3 | 88 40 13·1 | +1·091 | −0·444 | | | 32679 | 912 | 5967 | | | + 1 3528 | 1343 |
| 1344 | 99·55 | 3 | 87 18 34·7 | +1·023 | −0·439 | | | 32705 | | 5974 | | | + 2 3420 | 1344 |
| 1345 | 99·22 | 3 | 86 14 51·5 | +0·919 | −0·435 | | | 32749 | 959 | 5983 | | | + 3 3528 | 1345 |
| 1346 | 97·55 | 3 | 118 2 56·2 | +0·841 | −0·552 | | | 32727 | | | | 4440 | | 1346 |
| 1347 | 97·57 | 3 | 87 54 30·5 | +0·824 | −0·441 | | | 32792 | 981 | 5987 | | | + 2 3427 | 1347 |
| 1348 | 98·95 | 3 | 89 18 51·4 | +0·769 | −0·446 | | | 32812 | 998 | | | 4442 | + 0 3813 | 1348 |
| 1349 | 99·61 | 5 | 63 56 2·1 | +0·754 | −0·353 | −0·009 | 2249 | | | | 4677 | 4443 | +26 3120 | 1349 |
| 1350 | 99·54 | 3 | 89 55 10·7 | +0·704 | −0·448 | | | | 1014 | | 4679 | | + 0 3816 | 1350 |

1323. Authority for Proper Motions: Porter. 1337. The Proper Motions have been specially computed for the present catalogue.

| No. | Constellation. | Magnitude. | Number of Estimations. | Mean Year and Fraction of Year. | Number of Observations. | Mean R.A. | Precess. | Sec. Var. | Proper Motion. | No. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | h. m. s. | s. | s. | s. | |
| 1351 | Sagittarii ... ... ... | 5·9 | ... | 97·91 | 3 | 17 52 18·28 | + 3·8056 | +0·0028 | | 1351 |
| 1352 | Ophiuchi ... ... ... | 7·1 | 3 | 99·55 | 3 | 17 52 48·84 | + 3·0199 | +0·0023 | | 1352 |
| 1353 | Ophiuchi ... ... ... | 7·2 | ... | 99·23 | 3 | 17 53 2·13 | + 3·0090 | +0·0023 | | 1353 |
| 1354 | 35 Draconis ... ... ... | 5·1 | ... | 99·59 | 3 | 17 53 55·46 | − 2·7045 | +0·0142 | +0·0135 | 1354 |
| 1355 | 33 Draconis ... ... γ | 2·5 | ... | 97·36 | 5 | 17 54 16·88 | + 1·3926 | +0·0030 | −0·0017 | 1355 |
| 1356 | Ophiuchi ... ... ... | 6·7 | 1 | 98·65 | 3 | 17 55 9·70 | + 3·0579 | +0·0022 | | 1356 |
| 1357 | 66 Ophiuchi ... ... ... | 4·8 | ... | 97·58 | 3 | 17 55 18·60 | + 2·9705 | +0·0022 | −0·0024 | 1357 |
| 1358 | 67 Ophiuchi ... ... ... | 3·9 | ... | 96·59 | 3 | 17 55 38·10 | + 3·0042 | +0·0021 | −0·0004 | 1358 |
| 1359 | 68 Ophiuchi ... ... ... | 4·5 | ... | 98·58 | 3 | 17 56 40·72 | + 3·0422 | +0·0021 | −0·0008 | 1359 |
| 1360 | Ophiuchi ... ... ... | 6·3 | 1 | 98·68 | 3 | 17 59 34·47 | + 3·0281 | +0·0019 | | 1360 |
| 1361 | 70 Ophiuchi ... ... ... | 4·1 | ... | 99·55 | 3 | 18 0 24·00 | + 3·0138 | +0·0019 | +0·0146 | 1361 |
| 1362 | Ophiuchi ... ... ... | 6·7 | .... | 98·96 | 3 | 18 0 41·19 | + 2·9638 | +0·0019 | −0·0020 | 1362 |
| 1363 | Ophiuchi ... ... ... | 7·3 | 1 | 99·55 | 3 | 18 0 44·98 | + 3·0265 | +0·0019 | | 1363 |
| 1364 | Sagittarii ... ... ... | 4·7 | ... | 97·90 | 3 | 18 1 44·91 | + 3·7976 | +0·0013 | +0·0007 | 1364 |
| 1365 | Ophiuchi ... ... ... | 6·6 | ... | 99·00 | 3 | 18 2 19·41 | + 3·0151 | +0·0018 | 0·0000 | 1365 |
| 1366 | 72 Ophiuchi ... ... ... | 3·7 | ... | 98·50 | 10 | 18 2 36·44 | + 2·8478 | +0·0019 | −0·0056 | 1366 |
| 1367 | Ophiuchi ... ... ... | 7·0 | 2 | 99·30 | 4 | 18 3 4·96 | + 3·0212 | +0·0018 | | 1367 |
| 1368 | Ophiuchi ... ... ... | 6·9 | ... | 99·27 | 3 | 18 3 49·74 | + 3·0266 | +0·0017 | | 1368 |
| 1369 | Ophiuchi ... ... ... | 7·3 | 1 | 99·57 | 3 | 18 3 50·25 | + 3·0207 | +0·0017 | | 1369 |
| 1370 | 23 Ursae Minoris ... δ | 4·5 | ... | 99·17 | 35 | 18 4 32·82 | −19·5125 | −0·1264 | +0·0245 | 1370 |
| 1371 | 73 Ophiuchi ... ... ... | 5·6 | ... | 99·30 | 3 | 18 4 35·53 | + 2·9799 | +0·0017 | +0·0013 | 1371 |
| 1372 | Ophiuchi ... ... ... | 6·7 | 1 | 99·02 | 3 | 18 4 53·78 | + 3·0001 | +0·0017 | 0·0000 | 1372 |
| 1373 | Serpentis ... ... ... | 7·9* | ... | 99·64 | 3 | 18 5 17·80 | + 3·0605 | +0·0016 | | 1373 |
| 1374 | Ophiuchi ... ... ... | 5·7 | ... | 98·95 | 3 | 18 5 40·50 | + 2·9955 | +0·0017 | | 1374 |
| 1375 | Ophiuchi ... ... ... | 7·7* | ... | 99·61 | 3 | 18 5 52·90 | + 2·9696 | +0·0017 | | 1375 |
| 1376 | Ophiuchi ... ... ... | 6·5 | ... | 99·27 | 3 | 18 7 39·48 | + 3·0076 | +0·0015 | | 1376 |
| 1377 | 13 Sagittarii ... ... μ | 4·0 | ... | 01·08 | 4 | 18 7 46·93 | + 3·5879 | +0·0007 | −0·0014 | 1377 |
| 1378 | Ophiuchi ... ... ... | 6·6 | ... | 99·61 | 3 | 18 8 3·41 | + 3·0037 | +0·0015 | | 1378 |
| 1379 | Ophiuchi ... ... ... | 6·6 | ... | 98·71 | 3 | 18 8 50·40 | + 3·0175 | +0·0015 | | 1379 |
| 1380 | Serpentis ... ... ... | 7·5 | 1 | 00·53 | 4 | 18 9 26·46 | + 3·0693 | +0·0014 | | 1380 |
| 1381 | Ophiuchi ... ... ... | 7·3 | 2 | 99·55 | 3 | 18 9 53·70 | + 2·9877 | +0·0015 | | 1381 |
| 1382 | Ophiuchi ... ... ... | 6·3 | ... | 98·70 | 3 | 18 11 3·78 | + 3·0181 | +0·0014 | | 1382 |
| 1383 | Sagittarii ... ... ... | 5·0 | 1 | 97·62 | 3 | 18 11 47·56 | + 3·7552 | −0·0002 | | 1383 |
| 1384 | Serpentis ... ... ... | 6·4 | ... | 98·10 | 6 | 18 11 59·80 | + 3·0501 | +0·0013 | | 1384 |
| 1385 | 19 Sagittarii ... ... δ | 2·9 | ... | 97·58 | 3 | 18 14 35·43 | + 3·8389 | −0·0009 | +0·0014 | 1385 |
| 1386 | Ophiuchi ... ... ... | 8·3* | ... | 97·29 | 3 | 18 14 58·15 | + 2·9722 | +0·0012 | | 1386 |
| 1387 | Sagittarii ... ... ... | 6·1 | ... | 97·23 | 3 | 18 15 40·34 | + 3·7961 | −0·0009 | | 1387 |
| 1388 | 74 Ophiuchi ... ... ... | 5·0 | 1 | 99·59 | 3 | 18 15 52·45 | + 2·9951 | +0·0011 | −0·0013 | 1388 |
| 1389 | 58 Serpentis ... ... η | 3·5 | ... | 99·15 | 31 | 18 16 8·07 | + 3·1409 | +0·0008 | −0·0400 | 1389 |
| 1390 | 1 Lyrae ... ... ... κ | 4·3 | ... | 02·56 | 3 | 18 16 21·36 | + 2·1033 | +0·0020 | −0·0021 | 1390 |
| 1391 | Ophiuchi ... ... ... | 9·0 | 2 | 97·26 | 3 | 18 18 12·96 | + 2·9697 | +0·0011 | | 1391 |
| 1392 | Serpentis ... ... ... | 8·5 | 1 | 99·61 | 3 | 18 19 0·08 | + 3·0391 | +0·0009 | | 1392 |
| 1393 | Ophiuchi ... ... ... | 6·6 | ... | 98·62 | 3 | 18 20 13·21 | + 2·9555 | +0·0010 | | 1393 |
| 1394 | Serpentis ... ... ... | 7·0 | 1 | 98·72 | 3 | 18 20 57·60 | + 3·0559 | +0·0008 | | 1394 |
| 1395 | Sagittarii ... ... ... | 5·8 | ... | 97·28 | 3 | 18 21 25·76 | + 3·8374 | −0·0020 | | 1395 |

1355, 1389. Orange. magnitude precedes, north. and is north.

1361. Close double. Observed as one mass.
1379, 1382. Reddish.

1373. A companion of about the ninth
1391. A star (B.D. +4° 3723), magnitude 9·5, precedes 2ˢ or 3ˢ

| No. | Mean Year and Fraction of Year. | Number of Observations. | Mean N.P.D. | Precess. | Sec. Var. | Proper Motion. | Auwers' Bradley, 1755. | Lalande, 1800. | Weisse's Bessel (1), 1825. | Albany (A.G.), 1875. | Radcliffe, 1890. | Greenwich, 1890. | B.D. | No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ° ′ ″ | ″ | ″ | ″ | | | | | | | ° | |
| 1351 | 97·91 | 3 | 118 44 52·5 | +0·673 | −0·555 | | | 32807 | | | | 4447 | | 1351 |
| 1352 | 99·55 | 3 | 87 44 6·8 | +0·628 | −0·440 | | | 32879 | 1031 | 6006 | | | + 2 3436 | 1352 |
| 1353 | 99·23 | 3 | 87 16 8·1 | +0·609 | −0·439 | | | | 1040 | 6007 | | | + 2 3438 | 1353 |
| 1354 | 98·96 | 5 | 13 1 25·4 | +0·531 | +0·394 | −0·239 | 2287 | 33292 | | | 4701 | 4455 | +76 667 | 1354 |
| 1355 | 97·36 | 5 | 38 29 57·5 | +0·500 | −0·203 | +0·028 | 2267 | 33043 | | | 4699 | 4454 | +51 2282 | 1355 |
| 1356 | 98·65 | 3 | 89 21 53·3 | +0·424 | −0·446 | | | 32962 | | | | | + 0 3832 | 1356 |
| 1357 | 97·58 | 3 | 85 37 31·6 | +0·410 | −0·433 | −0·020 | 2257 | | 1100 | 6023 | | | + 4 3570 | 1357 |
| 1358 | 96·59 | 3 | 87 3 49·4 | +0·382 | −0·438 | +0·013 | 2259 | 32984 | 1114 | 6025 | | 4459 | + 2 3458 | 1358 |
| 1359 | 98·58 | 3 | 88 41 32·9 | +0·290 | −0·444 | +0·003 | 2264 | 33027 | | 6038 | | | + 1 3560 | 1359 |
| 1360 | 98·68 | 3 | 88 5 9·2 | +0·037 | −0·442 | | | 33141 | 1202 | 6066 | 4725 | | + 1 3578 | 1360 |
| 1361 | 99·53 | 3 | 87 28 37·1 | −0·035 | −0·439 | +1·109 | 2271 | 33169 | 1228-9 | 6073 | | 4484 | + 2 3482 | 1361 |
| 1362 | 98·96 | 3 | 85 20 29·0 | −0·060 | −0·432 | +0·290 | | | 1236 | 6076 | | | + 4 3589 | 1362 |
| 1363 | 99·55 | 3 | 88 1 14·8 | −0·066 | −0·441 | | | | | 6077 | | | + 1 3585 | 1363 |
| 1364 | 97·90 | 3 | 118 28 4·8 | −0·153 | −0·554 | +0·061 | | 33173 | | | | 4488 | | 1364 |
| 1365 | 99·00 | 3 | 87 31 51·1 | −0·203 | −0·440 | −0·029 | 2272 | 33242 | 1269 | 6089 | | | + 2 3493 | 1365 |
| 1366 | 97·60 | 3 | 80 27 1·7 | −0·228 | −0·415 | −0·089 | 2275 | | 1282 | | 4740 | 4496 | + 9 3564 | 1366 |
| 1367 | 99·30 | 4 | 87 47 40·8 | −0·270 | −0·440 | | | 33280 | 1295 | 6096 | | | + 2 3498 | 1367 |
| 1368 | 99·27 | 3 | 88 1 14·5 | −0·335 | −0·441 | | | 33309 | 3 | 6106 | | | + 1 3604 | 1368 |
| 1369 | 99·57 | 3 | 87 46 19·7 | −0·336 | −0·440 | | | 33310 | | 6107 | | | + 2 3504 | 1369 |
| 1370 | 99·42 | 41 | 3 23 12·1 | −0·398 | +2·845 | −0·040 | 2395 | | | | 4764 | 4523 | +86 269 | 1370 |
| 1371 | 99·30 | 3 | 86 1 24·5 | −0·402 | −0·434 | +0·011 | 2277 | 33333 | | 6116 | | | + 3 3610 | 1371 |
| 1372 | 99·02 | 3 | 86 53 34·0 | −0·429 | −0·437 | +0·190 | | | 28 | 6121 | | | + 3 3613 | 1372 |
| 1373 | 99·64 | 3 | 89 28 31·7 | −0·464 | −0·446 | | | 33355 | 37 | | | | + 0 3870 | 1373 |
| 1374 | 98·95 | 3 | 86 41 42·9 | −0·496 | −0·436 | | | 33376 | 46 | 6129 | | | + 3 3620 | 1374 |
| 1375 | 99·61 | 3 | 85 35 7·9 | −0·515 | −0·433 | | | | | 6130 | | | + 4 3633 | 1375 |
| 1376 | 99·27 | 3 | 87 12 42·7 | −0·670 | −0·438 | | | 33461 | | 6145 | | | + 2 3528 | 1376 |
| 1377 | 01·61 | 3 | 111 5 6·5 | −0·681 | −0·523 | −0·001 | 2284 | 33433 | | | 4759 | 4519 | −21 4908 | 1377 |
| 1378 | 99·61 | 3 | 87 2 41·6 | −0·705 | −0·437 | | | 33476 | | 6149 | | | + 2 3532 | 1378 |
| 1379 | 98·71 | 3 | 87 38 1·5 | −0·773 | −0·439 | | | 33498 | 120 | 6154 | | | + 2 3537 | 1379 |
| 1380 | 00·53 | 4 | 89 51 7·7 | −0·826 | −0·447 | | | 33515 | 136 | | | | + 0 3892 | 1380 |
| 1381 | 99·55 | 3 | 86 21 24·8 | −0·866 | −0·435 | | | 33554 | 151 | 6162 | | | + 3 3643 | 1381 |
| 1382 | 98·70 | 3 | 87 39 16·6 | −0·968 | −0·439 | | | 33596 | 177 | 6167 | | | + 2 3547 | 1382 |
| 1383 | 97·62 | 3 | 117 4 42·7 | −1·031 | −0·546 | | | 33578 | | | | 4536 | | 1383 |
| 1384 | 98·10 | 6 | 89 1 43·4 | −1·049 | −0·444 | | | 33636 | 203 | 6172 | | | + 0 3907 | 1384 |
| 1385 | 97·58 | 3 | 119 52 14·5 | −1·276 | −0·558 | +0·029 | 2294 | 33696 | | | | 4544 | | 1385 |
| 1386 | 97·29 | 3 | 85 41 17·9 | −1·309 | −0·432 | | | | | 6194 | | | + 4 3703 | 1386 |
| 1387 | 97·23 | 3 | 118 28 31·8 | −1·370 | −0·552 | | | 33738 | | | | | | 1387 |
| 1388 | 99·59 | 3 | 86 40 3·2 | −1·388 | −0·435 | +0·002 | 2299 | 33799 | 282 | 6199 | | 4549 | + 3 3680 | 1388 |
| 1389 | 98·44 | 6 | 92 55 29·4 | −1·410 | −0·456 | +0·677 | 2298 | 33802 | 302 | | 4800 | 4550 | − 2 4599 | 1389 |
| 1390 | 00·64 | 3 | 53 58 50·2 | −1·430 | −0·305 | −0·035 | 2305 | 33879 | | | | 4552 | +36 3094 | 1390 |
| 1391 | 97·26 | 3 | 85 34 51·1 | −1·592 | −0·431 | | | | 352 | 6210 | | | + 4 3724 | 1391 |
| 1392 | 99·61 | 3 | 88 33 8·5 | −1·661 | −0·441 | | | 33935 | | 6214 | | | + 1 3663 | 1392 |
| 1393 | 98·62 | 3 | 84 58 13·6 | −1·767 | −0·429 | | | 34036 | | 6223 | | | + 5 3730 | 1393 |
| 1394 | 98·72 | 3 | 89 16 35·6 | −1·831 | −0·443 | | | 34015 | | | | | + 0 3931 | 1394 |
| 1395 | 97·28 | 3 | 119 52 36·5 | −1·873 | −0·556 | | | | | | | 4573 | | 1395 |

1358. Authority for Proper Motions: Auwers (Astronomische Nachrichten, 3929). 1362, 1372. Authority for Proper Motions: Porter. 1364. Authority for Proper Motions: Auwers (Mayer's Sternverzeichnis).

| No. | Constellation. | Magnitude. | Number of Estimations. | Mean Year and Fraction of Year. | Number of Observations. | Mean R.A. | Precess. | Sec. Var. | Proper Motion. | No. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | h. m. s. | s. | s. | s. | |
| 1396 | 22 Sagittarii ... ... λ | 2·9 | ... | 98·58 | 13 | 18 21 47·89 | +3·7068 | −0·0015 | −0·0052 | 1396 |
| 1397 | 59 Serpentis ... ... *d* | 7·8† | ... | 98·70 | 3 | 18 22 5·36 | +3·0696 | +0·0007 | −0·0018 | 1397 |
| 1398 | 59 Serpentis ... ... *d* | Var. | ... | 98·64 | 5 | 18 22 5·48 | +3·0696 | +0·0007 | −0·0018 | 1398 |
| 1399 | Ophiuchi ... ... ... | 6·8 | 3 | 96·95 | 3 | 18 22 51·54 | +2·9870 | +0·0008 | | 1399 |
| 1400 | 44 Draconis ... ... χ | 3·7 | ... | 99·60 | 3 | 18 22 51·72 | −1·1951 | −0·0145 | +0·1129 | 1400 |
| 1401 | Serpentis ... ... ... | 7·3 | 2 | 96·94 | 3 | 18 25 7·04 | +2·9798 | +0·0007 | | 1401 |
| 1402 | Serpentis ... ... ... | 7·3 | 2 | 98·27 | 3 | 18 25 44·21 | +2·9695 | +0·0007 | | 1402 |
| 1403 | Serpentis ... ... ... | 6·8 | 2 | 97·57 | 3 | 18 27 7·82 | +2·9895 | +0·0006 | | 1403 |
| 1404 | Serpentis ... ... ... | 7·7 | 3 | 99·61 | 3 | 18 28 28·56 | +3·0304 | +0·0004 | | 1404 |
| 1405 | Herculis ... ... ... | 8·7 | 1 | 97·28 | 3 | 18 29 5·90 | +2·5301 | +0·0015 | −0·0160 | 1405 |
| 1406 | Serpentis ... ... ... | 6·9 | 1 | 97·92 | 3 | 18 30 40·25 | +2·9602 | +0·0006 | | 1406 |
| 1407 | Serpentis ... ... ... | 7·0 | 3 | 98·58 | 3 | 18 31 32·94 | +2·9599 | +0·0005 | | 1407 |
| 1408 | Serpentis ... ... ... | 7·1 | 4 | 97·29 | 3 | 18 31 55·36 | +2·9870 | +0·0004 | | 1408 |
| 1409 | Serpentis ... ... ... | 7·0 | 1 | 97·30 | 3 | 18 32 4·06 | +3·0527 | +0·0002 | | 1409 |
| 1410 | 3 Lyrae ... ... ... *a* | 0·1 | ... | 99·81 | 11 | 18 33 33·05 | +2·0136 | +0·0016 | +0·0173 | 1410 |
| 1411 | Serpentis ... ... ... | 6·8 | 1 | 98·62 | 3 | 18 33 43·59 | +2·9624 | +0·0004 | | 1411 |
| 1412 | Serpentis ... ... ... | 6·7 | 3 | 98·31 | 3 | 18 34 41·52 | +2·9530 | +0·0004 | | 1412 |
| 1413 | Serpentis ... ... ... | 7·7 | 3 | 99·61 | 3 | 18 36 20·46 | +3·0618 | −0·0001 | | 1413 |
| 1414 | Serpentis ... ... ... | 7·2 | 3 | 97·99 | 3 | 18 36 22·93 | +2·9696 | +0·0003 | | 1414 |
| 1415 | 2 Aquilae ... ... ... | 5·5 | 1 | 99·44 | 20 | 18 36 47·85 | +3·2852 | −0·0011 | −0·0004 | 1415 |
| 1416 | Serpentis ... ... ... | 7·8 | 2 | 99·61 | 3 | 18 38 27·71 | +2·9878 | +0·0001 | | 1416 |
| 1417 | 27 Sagittarii ... ... φ | 3·7 | 1 | 96·59 | 3 | 18 39 24·50 | +3·7465 | −0·0043 | +0·0014 | 1417 |
| 1418 | 4 Aquilae ... ... ... | 5·7 | 2 | 97·26 | 3 | 18 39 47·00 | +3·0277 | −0·0001 | −0·0007 | 1418 |
| 1419 | Serpentis ... ... ... | 6·6 | 5 | 97·29 | 3 | 18 43 4·89 | +2·9779 | −0·0001 | | 1419 |
| 1420 | Aquilae ... ... ... | 6·7 | 2 | 98·59 | 3 | 18 44 31·48 | +3·0562 | −0·0005 | | 1420 |
| 1421 | Herculis ... ... ... | 8·0 | 2 | 97·98 | 3 | 18 45 22·71 | +2·5207 | +0·0012 | | 1421 |
| 1422 | Sagittarii ... ... ... | 6·3 | ... | 97·27 | 3 | 18 46 15·92 | +3·8136 | −0·0060 | | 1422 |
| 1423 | 10 Lyrae ... ... ... $\beta^1$ | Var. | 1 | 00·41 | 10 | 18 46 23·25 | +2·2143 | +0·0015 | −0·0007 | 1423 |
| 1424 | Aquilae ... ... ... | 7·7* | ... | 98·58 | 3 | 18 49 27·31 | +3·0323 | −0·0006 | | 1424 |
| 1425 | Aquilae ... ... ... | 7·7* | ... | 98·58 | 3 | 18 49 33·28 | +3·0326 | −0·0006 | | 1425 |
| 1426 | Aquilae ... ... ... | 7·6* | ... | 98·64 | 3 | 18 49 49·42 | +3·0500 | −0·0007 | | 1426 |
| 1427 | Serpentis ... ... ... | 7·5 | ... | 98·00 | 3 | 18 50 36·46 | +2·9745 | −0·0004 | | 1427 |
| 1428 | Aquilae ... ... ... | 7·7 | ... | 98·99 | 3 | 18 50 39·71 | +3·0696 | −0·0009 | | 1428 |
| 1429 | Serpentis ... ... ... | 7·0 | 1 | 99·29 | 3 | 18 50 48·83 | +2·9970 | −0·0005 | | 1429 |
| 1430 | 63 Serpentis ... ... θ | 5·5 | 2 | 98·69 | 3 | 18 51 14·80 | +2·9799 | −0·0004 | +0·0010 | 1430 |
| 1431 | Serpentis ... ... ... | 6·2 | 2 | 98·69 | 3 | 18 51 16·28 | +2·9799 | −0·0004 | +0·0010 | 1431 |
| 1432 | Serpentis ... ... ... | 6·3 | ... | 98·72 | 3 | 18 51 23·57 | +3·0194 | −0·0006 | | 1432 |
| 1433 | Serpentis ... ... ... | 7·3 | 1 | 99·58 | 3 | 18 51 39·26 | +2·9785 | −0·0004 | −0·0014 | 1433 |
| 1434 | 64 Serpentis ... ... ... | 5·5 | ... | 98·70 | 3 | 18 52 14·83 | +3·0181 | −0·0007 | −0·0008 | 1434 |
| 1435 | Aquilae ... ... ... | 7·5 | 2 | 97·64 | 3 | 18 53 20·79 | +3·0486 | −0·0009 | | 1435 |
| 1436 | 13 Aquilae ... ... ε | 4·3 | ... | 00·97 | 9 | 18 55 4·99 | +2·7264 | +0·0005 | −0·0049 | 1436 |
| 1437 | 52 Draconis ... ... υ | 4·9 | ... | 99·61 | 3 | 18 55 37·35 | −0·7311 | −0·0305 | +0·0103 | 1437 |
| 1438 | Serpentis ... ... ... | 7·2 | ... | 98·68 | 3 | 18 56 9·39 | +3·0196 | −0·0009 | −0·0010 | 1438 |
| 1439 | Serpentis ... ... ... | 7·1 | ... | 98·71 | 3 | 18 56 10·33 | +3·0299 | −0·0009 | | 1439 |
| 1440 | Sagittarii ... ... ... | 6·0 | 1 | 97·26 | 3 | 18 56 20·33 | +3·6770 | −0·0061 | −0·0053 | 1440 |

1397. Blue. 1398. Orange. The limits of magnitude are 5·0 and 5·7; the period is 8·7 days. 1399. Red. 1402. There is a star (Albany 6254) of nearly same R.A. and about 1½′ north. 1406. Brighter of two widely separated stars. 1419. Orange-red. 1423. 1897 Sept. 10, magnitude 3. Chandler's limits are 3·4 and 4·5; the period is 13 days. 1424, 1425. The second star is the brighter.

| No. | Mean Year and Fraction of Year. | Number of Observations. | Mean N.P.D. | Precess. | Sec. Var. | Proper Motion. | Auwers' Bradley, 1755. | Lalande, 1800. | Weisse's Bessel (1), 1825. | Albany (A. G.), 1875. | Radcliffe, 1890. | Greenwich, 1890. | B.D. | No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ° ′ ″ | ″ | ″ | ″ | | | | | | | ° | |
| 1396 | 98·11 | 4 | 115 28 37·0 | −1·904 | −0·537 | +0·198 | 2310 | | | | 4831 | 4575 | | 1396 |
| 1397 | 98·70 | 3 | 89 51 45·1 | −1·930 | −0·445 | +0·002 | 2312 | 34063 | 453 | | | 4576 | + 0 3936 | 1397 |
| 1398 | 98·63 | 4 | 89 51 47·7 | −1·930 | −0·445 | +0·002 | 2312 | 34063 | 453 | | 4836 | 4577 | + 0 3936 | 1398 |
| 1399 | 96·95 | 3 | 86 18 45·3 | −1·997 | −0·433 | | | 34115 | 478 | 6238 | | | + 3 3716 | 1399 |
| 1400 | 99·06 | 4 | 17 18 37·3 | −1·997 | +0·175 | +0·374 | 2337 | 34392 | | | 4840 | 4583 | +72 839 | 1400 |
| 1401 | 96·94 | 3 | 86 0 4·3 | −2·193 | −0·431 | | | 34208 | 535 | 6250 | | | + 3 3727 | 1401 |
| 1402 | 98·27 | 3 | 85 33 26·4 | −2·247 | −0·429 | | | 34232 | 556 | 6253 | | | + 4 3774 | 1402 |
| 1403 | 97·57 | 3 | 86 24 44·0 | −2·368 | −0·432 | | | 34289 | 592 | 6261 | | | + 3 3737 | 1403 |
| 1404 | 99·61 | 3 | 88 10 17·7 | −2·485 | −0·438 | | | 34337 | 623 | 6268 | | | + 1 3712 | 1404 |
| 1405 | 97·28 | 3 | 67 44 52·9 | −2·540 | −0·365 | +0·450 | | | | | | | +22 3406 | 1405 |
| 1406 | 97·92 | 3 | 85 8 36·0 | −2·675 | −0·427 | | | 34438 | 681 | 6279 | | | + 4 3801 | 1406 |
| 1407 | 98·58 | 3 | 85 7 35·6 | −2·752 | −0·426 | | | 34468 | 701 | 6285 | | | + 4 3806 | 1407 |
| 1408 | 97·29 | 3 | 86 17 36·8 | −2·784 | −0·430 | | | | | 6289 | | | + 3 3755 | 1408 |
| 1409 | 97·30 | 3 | 89 7 59·6 | −2·797 | −0·440 | | | 34489 | 715 | 6290 | | | + 0 3975 | 1409 |
| 1410 | 99·65 | 5 | 51 18 33·9 | −2·925 | −0·289 | −0·295 | 2341 | 34598 | | | 4897 | 4649 | +38 3238 | 1410 |
| 1411 | 98·62 | 3 | 85 13 53·6 | −2·940 | −0·426 | | | 34556 | 769 | 6309 | | | + 4 3823 | 1411 |
| 1412 | 98·31 | 3 | 84 49 31·6 | −3·024 | −0·424 | | | 34590 | 796 | 6318 | | | + 5 3891 | 1412 |
| 1413 | 99·61 | 3 | 89 31 43·1 | −3·166 | −0·440 | | | 34645 | 840 | | | | + 0 3993 | 1413 |
| 1414 | 97·99 | 3 | 85 32 4·3 | −3·170 | −0·426 | | | 34653 | | 6331 | | | + 4 3838 | 1414 |
| 1415 | 98·97 | 3 | 99 8 53·2 | −3·206 | −0·472 | −0·005 | 2342 | 34647 | 844 | | 4910 | 4664 | − 9 4796 | 1415 |
| 1416 | 99·61 | 3 | 86 18 43·4 | −3·350 | −0·428 | | | 34723 | | 6341 | | | + 3 3784 | 1416 |
| 1417 | 96·59 | 3 | 117 5 35·8 | −3·431 | −0·537 | +0·019 | 2344 | 34713 | | | | 4683 | | 1417 |
| 1418 | 97·26 | 3 | 88 2 30·4 | −3·463 | −0·433 | +0·026 | 2346 | 34782 | 943 | 6359 | | | + 1 3766 | 1418 |
| 1419 | 97·29 | 3 | 85 52 7·9 | −3·747 | −0·425 | | | | 1024 | 6381 | | | + 4 3884 | 1419 |
| 1420 | 98·59 | 3 | 89 16 36·6 | −3·871 | −0·436 | | | 35005 | | | | | + 0 4027 | 1420 |
| 1421 | 97·98 | 3 | 67 9 36·9 | −3·945 | −0·359 | | | | | | | | +22 3494 | 1421 |
| 1422 | 97·27 | 3 | 119 29 52·3 | −4·021 | −0·543 | | | 35018 | | | | 4723 | | 1422 |
| 1423 | 00·01 | 5 | 56 45 12·9 | −4·031 | −0·315 | −0·017 | 2369 | 35134 | | | 4969 | 4727 | +33 3223 | 1423 |
| 1424 | 98·58 | 3 | 88 13 33·3 | −4·294 | −0·430 | | | 35215 | | 6413 | | | + 1 3814 | 1424 |
| 1425 | 98·58 | 3 | 88 14 15·1 | −4·302 | −0·430 | | | 35219 | | 6414 | | | + 1 3815 | 1425 |
| 1426 | 98·64 | 3 | 89 0 12·7 | −4·325 | −0·432 | | | 35228 | 1208 | 6418 | | | + 0 4051 | 1426 |
| 1427 | 98·00 | 3 | 85 41 30·1 | −4·392 | −0·421 | | | 35267 | | 6421 | | | + 4 3909 | 1427 |
| 1428 | 98·99 | 3 | 89 51 46·1 | −4·397 | −0·435 | | | 35263 | | | | | + 0 4055 | 1428 |
| 1429 | 99·29 | 3 | 86 40 41·8 | −4·410 | −0·424 | | | | 1238 | 6424 | | | + 3 3836 | 1429 |
| 1430 | 98·69 | 3 | 85 55 34·9 | −4·447 | −0·422 | −0·042 | 2376 | 35295 | 1252 | 6429 | | 4765 | + 4 3916 | 1430 |
| 1431 | 98·69 | 3 | 85 55 40·2 | −4·449 | −0·422 | −0·057 | 2377 | 35334 | 1255 | 6430 | | 4766 | + 4 3917 | 1431 |
| 1432 | 98·72 | 3 | 87 39 30·1 | −4·459 | −0·427 | | | 35302 | 1258 | 6431 | | | + 2 3730 | 1432 |
| 1433 | 99·58 | 3 | 85 51 45·6 | −4·482 | −0·421 | +0·093 | | 35358 | 1265 | 6433 | | | + 4 3919 | 1433 |
| 1434 | 98·70 | 3 | 87 35 45·5 | −4·532 | −0·427 | +0·003 | 2379 | 35330 | 1272 | 6442 | | | + 2 3738 | 1434 |
| 1435 | 97·64 | 3 | 88 56 9·2 | −4·626 | −0·431 | | | 35385 | | 6449 | | | + 1 3837 | 1435 |
| 1436 | 02·68 | 3 | 75 4 2·2 | −4·773 | −0·384 | +0·080 | 2390 | 35469 | | | 5018 | 4784 | +14 3736 | 1436 |
| 1437 | 98·91 | 3 | 18 50 10·7 | −4·819 | +0·106 | −0·031 | 2411 | 35749 | | | | 4794 | +71 915 | 1437 |
| 1438 | 98·68 | 3 | 87 39 8·5 | −4·864 | −0·425 | +0·280 | | | | 6474 | | | + 2 3753 | 1438 |
| 1439 | 98·71 | 3 | 88 6 29·5 | −4·866 | −0·427 | | | | | 6475 | | | + 1 3854 | 1439 |
| 1440 | 97·26 | 3 | 114 59 5·6 | −4·880 | −0·518 | +0·182 | | 35458 | | | | 4793 | | 1440 |

1405. The Proper Motions have been specially computed for the present catalogue.
Motions: Boss.
1438. The Proper Motion adopted is the mean of Porter and Boss.
Motions: Auwers (Mayer's Sternverzeichnis).
1433. Authority for Proper
1440. Authority for Proper

| No. | Constellation. | Magnitude. | Number of Estimations. | Mean Year and Fraction of Year. | Number of Observations. | Mean R.A. | Precess. | Sec. Var. | Proper Motion. | No. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | h. m. s. | s. | s. | s. | |
| 1441 | Serpentis ... ... ... | 7·3 | ... | 99·00 | 3 | 18 56 31·67 | + 3·0174 | — 0·0009 | | 1441 |
| 1442 | Aquilae ... ... ... | 7·0 | 1 | 98·96 | 3 | 18 58 13·12 | + 3·0630 | — 0·0012 | | 1442 |
| 1443 | Aquilae ... ... ... | 6·3 | 1 | 99·15 | 4 | 18 58 28·65 | + 3·0349 | — 0·0010 | | 1443 |
| 1444 | Aquilae ... ... ... | 7·1 | 3 | 97·26 | 3 | 18 58 33·55 | + 3·0185 | — 0·0010 | | 1444 |
| 1445 | Aquilae ... ... ... | 6·5 | ... | 98·66 | 3 | 18 59 10·55 | + 3·0009 | — 0·0009 | | 1445 |
| 1446 | Aquilae ... ... ... | 7·4 | 1 | 98·70 | 3 | 19 0 45·02 | + 2·9796 | — 0·0008 | | 1446 |
| 1447 | 17 Aquilae ... ... $\zeta$ | 3·0 | ... | 99·62 | 11 | 19 0 48·78 | + 2·7579 | + 0·0003 | — 0·0026 | 1447 |
| 1448 | Herculis ... ... ... | 8·7 | 1 | 97·29 | 3 | 19 0 53·05 | + 2·5273 | + 0·0010 | + 0·0130 | 1448 |
| 1449 | Sagittarii ... ... ... | 6·3 | 1 | 97·30 | 3 | 19 1 13·00 | + 3·7813 | — 0·0081 | | 1449 |
| 1450 | Aquilae ... ... ... | 7·3 | 1 | 98·72 | 3 | 19 2 2·88 | + 3·0618 | — 0·0014 | | 1450 |
| 1451 | Aquilae ... ... ... | 7·3 | 1 | 98·67 | 3 | 19 2 25·00 | + 2·9586 | — 0·0008 | | 1451 |
| 1452 | Aquilae ... ... ... | 7·5 | ... | 98·02 | 3 | 19 3 9·07 | + 3·0471 | — 0·0013 | | 1452 |
| 1453 | Aquilae ... ... ... | 7·2 | 2 | 98·63 | 3 | 19 6 9·31 | + 2·9602 | — 0·0009 | | 1453 |
| 1454 | Aquilae ... ... ... | 7·4 | 3 | 98·65 | 3 | 19 6 10·68 | + 2·9581 | — 0·0009 | | 1454 |
| 1455 | Aquilae ... ... ... | 7·4 | 2 | 99·60 | 3 | 19 7 1·53 | + 3·0178 | — 0·0013 | | 1455 |
| 1456 | 21 Aquilae ... ... ... | 5·9 | 2 | 97·27 | 3 | 19 8 40·19 | + 3·0254 | — 0·0014 | — 0·0010 | 1456 |
| 1457 | 42 Sagittarii ... ... $\psi$ | 5·0 | 1 | 98·74 | 8 | 19 9 24·55 | + 3·6794 | — 0·0080 | + 0·0004 | 1457 |
| 1458 | 22 Aquilae ... ... ... | 6·3 | 5 | 97·28 | 3 | 19 11 34·09 | + 2·9691 | — 0·0012 | — 0·0004 | 1458 |
| 1459 | Aquilae ... ... ... | 8·0 | 1 | 98·70 | 3 | 19 12 4·61 | + 3·0656 | — 0·0019 | | 1459 |
| 1460 | Aquilae ... ... ... | 6·0 | ... | 98·60 | 3 | 19 12 45·13 | + 3·0316 | — 0·0017 | | 1460 |
| 1461 | Aquilae ... ... ... | 8·4 | 3 | 99·61 | 3 | 19 12 45·39 | + 3·0037 | — 0·0014 | | 1461 |
| 1462 | 59 Draconis ... ... ... | 5·2 | ... | 99·63 | 3 | 19 12 50·27 | — 2·1739 | — 0·0928 | + 0·0090 | 1462 |
| 1463 | 25 Aquilae ... ... $\omega$ | 5·1 | ... | 98·38 | 9 | 19 13 7·34 | + 2·8165 | — 0·0003 | — 0·0014 | 1463 |
| 1464 | Aquilae ... ... ... | 7·0 | 1 | 99·00 | 3 | 19 13 24·38 | + 3·0674 | — 0·0020 | + 0·0013 | 1464 |
| 1465 | Aquilae ... ... ... | 7·3 | 4 | 98·65 | 3 | 19 13 26·68 | + 2·9628 | — 0·0012 | | 1465 |
| 1466 | 23 Aquilae ... ... ... | 5·2 | ... | 98·99 | 3 | 19 13 27·17 | + 3·0527 | — 0·0018 | — 0·0016 | 1466 |
| 1467 | 24 Aquilae ... ... ... | 7·0 | 2 | 99·01 | 3 | 19 13 43·96 | + 3·0693 | — 0·0020 | — 0·0039 | 1467 |
| 1468 | Aquilae ... ... ... | 7·3 | 3 | 97·61 | 3 | 19 15 22·64 | + 2·9711 | — 0·0013 | — 0·0026 | 1468 |
| 1469 | Aquilae ... ... ... | 7·3 | 2 | 97·66 | 3 | 19 16 7·09 | + 2·9638 | — 0·0013 | | 1469 |
| 1470 | Aquilae ... ... ... | 7·8 | ... | 98·72 | 3 | 19 17 14·10 | + 3·0685 | — 0·0021 | | 1470 |
| 1471 | 30 Aquilae ... ... $\delta$ | 3·0 | 1 | 98·06 | 22 | 19 20 27·35 | + 3·0088 | — 0·0018 | + 0·0153 | 1471 |
| 1472 | 32 Aquilae ... ... $\nu$ | 5·3 | 2 | 98·64 | 3 | 19 21 24·24 | + 3·0697 | — 0·0023 | — 0·0009 | 1472 |
| 1473 | Ursae Minoris ... $\lambda$ | 6·3 | 1 | 00·05 | 41 | 19 22 29·96 | — 67·7358 | — 26·8300 | — 0·0533 | 1473 |
| 1474 | Aquilae ... ... ... | 7·2 | 4 | 96·66 | 3 | 19 22 43·61 | + 2·9741 | — 0·0016 | | 1474 |
| 1475 | Aquilae ... ... ... | 7·3 | 2 | 97·96 | 3 | 19 22 48·84 | + 3·0297 | — 0·0020 | | 1475 |
| 1476 | Aquilae ... ... ... | 5·9 | ... | 98·70 | 3 | 19 23 19·53 | + 3·0132 | — 0·0019 | | 1476 |
| 1477 | Aquilae ... ... ... | 8·1* | ... | 98·72 | 3 | 19 23 40·79 | + 2·9966 | — 0·0018 | | 1477 |
| 1478 | 35 Aquilae ... ... $c$ | 6·4 | 2 | 97·99 | 3 | 19 23 57·59 | + 3·0347 | — 0·0021 | — 0·0010 | 1478 |
| 1479 | Aquilae ... ... ... | 6·9 | 1 | 99·61 | 3 | 19 24 10·89 | + 3·0718 | — 0·0025 | | 1479 |
| 1480 | 6 Vulpeculae ... $\alpha$ | 4·6 | ... | 98·46 | 5 | 19 24 32·60 | + 2·5055 | + 0·0009 | — 0·0108 | 1480 |
| 1481 | Aquilae ... ... ... | 6·9 | 2 | 98·00 | 3 | 19 25 9·15 | + 3·0140 | — 0·0020 | | 1481 |
| 1482 | Aquilae ... ... ... | 6·7 | 1 | 98·65 | 3 | 19 25 32·87 | + 3·0023 | — 0·0019 | | 1482 |
| 1483 | Aquilae ... ... ... | 6·8 | ... | 98·70 | 3 | 19 26 1·93 | + 3·0336 | — 0·0022 | | 1483 |
| 1484 | 6 Cygni ... ... ... $\beta$ | 3·1 | ... | 99·26 | 4 | 19 26 41·24 | + 2·4191 | + 0·0011 | — 0·0017 | 1484 |
| 1485 | Aquilae ... ... ... | 7·4 | 2 | 98·01 | 3 | 19 26 41·74 | + 2·9682 | — 0·0016 | | 1485 |

1453, 1469, 1472, 1481. Reddish. 1454. 1899 Aug. 18, Aug. 31, Certainly fainter than No. 1453. In the Albany Catalogue this star is 0·7 magnitude brighter than No. 1453. 1484. Wide double : brighter observed. Orange.

| No. | Mean Year and Fraction of Year. | Number of Observations. | Mean N.P.D. | Precess. | Sec. Var. | Proper Motion. | Auwers' Bradley, 1755. | Lalande, 1800. | Weisse's Bessel (1), 1825. | Albany (A. G.), 1875. | Radcliffe, 1890. | Greenwich, 1890. | B.D. | No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ° ′ ″ | ″ | ″ | ″ | | | | | | | ° | |
| 1441 | 99·00 | 3 | 87 33 14·2 | −4·896 | −0·425 | | | | | 6478 | | | +2 3756 | 1441 |
| 1442 | 98·96 | 3 | 89 34 9·9 | −5·039 | −0·430 | | | | 1424 | | | | +0 4088 | 1442 |
| 1443 | 99·02 | 3 | 88 19 32·4 | −5·061 | −0·426 | | | 35598 | 1431 | 6495 | | | +1 3865 | 1443 |
| 1444 | 97·26 | 3 | 87 36 3·5 | −5·068 | −0·424 | | | | 1435 | 6496 | | | +2 3765 | 1444 |
| 1445 | 98·66 | 3 | 86 49 4·6 | −5·120 | −0·421 | | | | 1455 | 6502 | | | +3 3882 | 1445 |
| 1446 | 98·70 | 3 | 85 52 24·1 | −5·253 | −0·417 | | | | | 6522 | | | +4 3969 | 1446 |
| 1447 | 98·61 | 3 | 76 17 6·8 | −5·259 | −0·386 | +0·089 | 2405 | 35718 | | | 5050 | 4818 | +13 3899 | 1447 |
| 1448 | 97·29 | 3 | 67 4 48·0 | −5·264 | −0·353 | −0·280 | | | | | | | +22 3579 | 1448 |
| 1449 | 97·30 | 3 | 118 47 27·7 | −5·293 | −0·530 | | | | | | | 4822 | | 1449 |
| 1450 | 98·72 | 3 | 89 30 48·2 | −5·363 | −0·428 | | | 35758 | 1536 | | | | +0 4106 | 1450 |
| 1451 | 98·67 | 3 | 84 56 9·7 | −5·394 | −0·413 | | | | | 6538 | | | +4 3979 | 1451 |
| 1452 | 98·02 | 3 | 88 51 30·5 | −5·456 | −0·425 | | | 35810 | 1572 | 6546 | | | +1 3899 | 1452 |
| 1453 | 98·63 | 3 | 84 59 3·0 | −5·708 | −0·411 | | | 35968 | 64 | 6569 | | | +4 4004 | 1453 |
| 1454 | 98·65 | 3 | 84 53 23·0 | −5·710 | −0·411 | | | 35969 | 67 | 6570 | | | +5 4056 | 1454 |
| 1455 | 99·60 | 3 | 87 32 36·6 | −5·781 | −0·419 | | | 36008 | 85 | 6577 | | | +2 3815 | 1455 |
| 1456 | 97·27 | 3 | 87 52 35·3 | −5·919 | −0·419 | −0·011 | 2419 | 36086 | 136 | 6593 | | 4860 | +2 3824 | 1456 |
| 1457 | 96·94 | 3 | 115 25 44·3 | −5·980 | −0·510 | +0·029 | 2418 | | | | 5094 | 4863 | | 1457 |
| 1458 | 97·28 | 3 | 85 20 29·9 | −6·160 | −0·409 | +0·001 | 2424 | 36225 | 209 | 6612 | | 4874 | +4 4045 | 1458 |
| 1459 | 98·70 | 3 | 89 40 48·2 | −6·203 | −0·423 | | | 36256 | 222 | | | | +0 4158 | 1459 |
| 1460 | 98·60 | 3 | 88 8 49·9 | −6·259 | −0·417 | | | 36285 | 238 | 6617 | | | +1 3960 | 1460 |
| 1461 | 99·61 | 3 | 86 53 19·5 | −6·260 | −0·413 | | | | 239 | 6618 | | | +3 3966 | 1461 |
| 1462 | 98·54 | 6 | 13 36 21·5 | −6·266 | +0·304 | +0·133 | 2466 | 36682 | | | | | +76 717 | 1462 |
| 1463 | 97·64 | 3 | 78 35 5·2 | −6·290 | −0·387 | −0·025 | 2432 | 36319 | 255 | | 5114 | 4885 | +11 3790 | 1463 |
| 1464 | 99·00 | 3 | 89 45 30·1 | −6·313 | −0·422 | −0·032 | 2429 | 36313 | 254 | | 5118 | | +0 4166 | 1464 |
| 1465 | 98·65 | 3 | 85 3 2·0 | −6·316 | −0·407 | | | 36322 | 261 | 6621 | | | +4 4057 | 1465 |
| 1466 | 98·99 | 3 | 89 5 47·6 | −6·317 | −0·420 | −0·022 | 2430 | 36316 | 256 | | | | +0 4168 | 1466 |
| 1467 | 99·01 | 3 | 89 50 34·8 | −6·340 | −0·422 | −0·018 | 2431 | 36326 | 264 | | 5120 | | +0 4170 | 1467 |
| 1468 | 97·61 | 3 | 85 24 17·3 | −6·477 | −0·407 | +0·104 | | 36407 | | 6635 | | | +4 4071 | 1468 |
| 1469 | 97·66 | 3 | 85 4 25·9 | −6·538 | −0·406 | | | 36444 | 326 | 6639 | | | +4 4073 | 1469 |
| 1470 | 98·72 | 3 | 89 48 29·4 | −6·630 | −0·419 | | | | 359 | | | | +0 4186 | 1470 |
| 1471 | 97·94 | 6 | 87 5 4·8 | −6·896 | −0·409 | −0·091 | 2451 | 36646 | 435 | 6669 | 5162 | 4931 | +2 3879 | 1471 |
| 1472 | 98·64 | 3 | 89 51 38·6 | −6·973 | −0·417 | −0·024 | 2455 | 36679 | 456 | | 5164 | 4940 | +0 4206 | 1472 |
| 1473 | 00·73 | 32 | 1 0 44·0 | −7·063 | +9·249 | +0·006 | 2795 | | | | 5247 | 5037 | +88 112 | 1473 |
| 1474 | 96·66 | 3 | 85 29 33·8 | −7·082 | −0·403 | | | | 495 | 6690 | | | +4 4114 | 1474 |
| 1475 | 97·96 | 3 | 88 1 41·2 | −7·089 | −0·410 | | | 36751 | 497 | 6692 | | | +1 4004 | 1475 |
| 1476 | 98·70 | 3 | 87 16 23·7 | −7·131 | −0·408 | | | | | 6696 | | | +2 3892 | 1476 |
| 1477 | 98·72 | 3 | 86 30 36·0 | −7·160 | −0·405 | | | 36794 | 523 | 6698 | | | +3 4033 | 1477 |
| 1478 | 97·99 | 3 | 88 15 14·1 | −7·183 | −0·410 | +0·022 | 2463 | 36803 | 531 | 6701 | | | +1 4010 | 1478 |
| 1479 | 99·61 | 3 | 89 57 33·4 | −7·201 | −0·415 | | | 36813 | | | 5179 | | −0 3760 | 1479 |
| 1480 | 99·71 | 3 | 65 32 15·2 | −7·230 | −0·338 | +0·102 | 2467 | 36882 | | | 5182 | 4957 | +24 3759 | 1480 |
| 1481 | 98·00 | 3 | 87 18 13·5 | −7·280 | −0·406 | | | 36863 | 564 | 6713 | | | +2 3904 | 1481 |
| 1482 | 98·65 | 3 | 86 45 51·4 | −7·312 | −0·405 | | | 36890 | 573 | 6716 | | | +3 4043 | 1482 |
| 1483 | 98·70 | 3 | 88 11 52·7 | −7·352 | −0·408 | | | 36909 | | 6720 | | | +1 4021 | 1483 |
| 1484 | 99·64 | 3 | 62 15 0·8 | −7·405 | −0·325 | +0·013 | 2473 | 36969 | | | | 4970 | +27 3410 | 1484 |
| 1485 | 98·01 | 3 | 85 11 23·1 | −7·406 | −0·399 | | | | 605 | 6725 | | | +4 4138 | 1485 |

1448. The Proper Motions have been specially computed for the present catalogue.

1468. Authority for Proper Motions: Boss.

| No. | Constellation. | Magnitude. | Number of Estimations. | Mean Year and Fraction of Year. | Number of Observations. | Mean R.A. | Precess. | Sec. Var. | Proper Motion. | No. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | h. m. s. | s. | s. | s. | |
| 1486 | Aquilae ... ... ... | 6·8 | 3 | 96·94 | 3 | 19 28 10·93 | +2·9684 | −0·0017 | | 1486 |
| 1487 | Aquilae ... ... ... | 7·3 | 3 | 97·97 | 3 | 19 28 37·43 | +2·9960 | −0·0019 | | 1487 |
| 1488 | Aquilae ... ... ... | 6·8 | ... | 98·70 | 3 | 19 28 50·19 | +2·9590 | −0·0017 | | 1488 |
| 1489 | 38 Aquilae ... ... $\mu$ | 4·7 | ... | 99·23 | 5 | 19 29 12·23 | +2·9172 | −0·0013 | +0·0129 | 1489 |
| 1490 | Aquilae ... ... ... | 7·3 | 1 | 98·29 | 3 | 19 30 23·66 | +3·0147 | −0·0022 | +0·0026 | 1490 |
| 1491 | 52 Sagittarii ... ... $h^2$ | 4·7 | ... | 01·70 | 3 | 19 30 37·30 | +3·6508 | −0·0104 | +0·0041 | 1491 |
| 1492 | Aquilae ... ... ... | 7·0 | 1 | 99·65 | 3 | 19 30 53·91 | +3·0721 | −0·0027 | | 1492 |
| 1493 | 61 Draconis ... ... $\sigma$ | 4·8 | ... | 99·66 | 3 | 19 32 33·23 | −0·2136 | −0·0371 | +0·0973 | 1493 |
| 1494 | Sagittarii ... ... ... | 6·6 | ... | 98·28 | 3 | 19 32 41·75 | +3·7493 | −0·0124 | | 1494 |
| 1495 | Aquilae ... ... ... | 7·4 | ... | 98·71 | 3 | 19 33 14·59 | +3·0702 | −0·0028 | | 1495 |
| 1496 | Aquilae ... ... ... | 6·9 | 2 | 96·65 | 4 | 19 33 48·59 | +3·0051 | −0·0022 | | 1496 |
| 1497 | 53 Sagittarii ... ... ... | 6·3 | ... | 97·42 | 4 | 19 33 48·92 | +3·6099 | −0·0101 | −0·0029 | 1497 |
| 1498 | Sagittarii ... ... ... | 6·1 | ... | 97·42 | 4 | 19 34 6·44 | +3·6097 | −0·0101 | +0·0001 | 1498 |
| 1499 | 44 Aquilae ... ... $\sigma$ | 5·5 | 1 | 98·65 | 3 | 19 34 15·47 | +2·9619 | −0·0018 | −0·0018 | 1499 |
| 1500 | 54 Sagittarii ... ... $e^1$ | 5·5 | ... | 00·86 | 5 | 19 34 59·69 | +3·4357 | −0·0075 | +0·0026 | 1500 |
| 1501 | Aquilae ... ... ... | 7·8* | ... | 99·62 | 3 | 19 37 24·40 | +3·0440 | −0·0027 | +0·0100 | 1501 |
| 1502 | Aquilae ... ... ... | 7·4 | 5 | 96·61 | 3 | 19 39 34·43 | +2·9722 | −0·0020 | | 1502 |
| 1503 | Aquilae ... ... ... | 7·2 | 5 | 97·38 | 4 | 19 40 58·15 | +2·9881 | −0·0022 | | 1503 |
| 1504 | 50 Aquilae ... ... $\gamma$ | 2·8 | ... | 99·81 | 15 | 19 41 30·29 | +2·8517 | −0·0010 | −0·0005 | 1504 |
| 1505 | Aquilae ... ... ... | 7·0 | 2 | 98·64 | 3 | 19 42 28·12 | +3·0548 | −0·0030 | −0·0050 | 1505 |
| 1506 | 7 Sagittae ... ... $\delta$ | 3·9 | ... | 99·45 | 3 | 19 42 55·66 | +2·6747 | +0·0002 | −0·0008 | 1506 |
| 1507 | Aquilae ... ... ... | 7·7 | 1 | 99·63 | 3 | 19 44 41·28 | +3·0161 | −0·0026 | | 1507 |
| 1508 | Aquilae ... ... ... | 7·6 | 2 | 98·67 | 3 | 19 45 48·83 | +3·0604 | −0·0032 | | 1508 |
| 1509 | 53 Aquilae ... ... $\alpha$ | 0·8 | ... | 99·26 | 13 | 19 45 54·20 | +2·8917 | −0·0015 | +0·0351 | 1509 |
| 1510 | Aquilae ... ... ... | 6·7 | 3 | 98·16 | 4 | 19 46 27·66 | +2·9926 | −0·0024 | | 1510 |
| 1511 | 55 Aquilae ... ... $\eta$ | Var. | ... | 98·72 | 3 | 19 47 22·69 | +3·0571 | −0·0032 | −0·0017 | 1511 |
| 1512 | Aquilae ... ... ... | 6·9 | 5 | 96·61 | 3 | 19 48 24·02 | +2·9866 | −0·0024 | | 1512 |
| 1513 | 58 Aquilae ... ... ... | 6·2 | 1 | 99·67 | 3 | 19 49 37·42 | +3·0724 | −0·0034 | +0·0003 | 1513 |
| 1514 | 58 Sagittarii ... ... $\omega$ | 4·8 | ... | 97·63 | 3 | 19 49 42·88 | +3·6660 | −0·0132 | +0·0127 | 1514 |
| 1515 | 60 Aquilae ... ... $\beta$ | 3·8 | ... | 98·78 | 10 | 19 50 24·03 | +2·9450 | −0·0020 | +0·0007 | 1515 |
| 1516 | 59 Sagittarii ... ... $b$ | 4·6 | ... | 98·34 | 3 | 19 50 48·62 | +3·6872 | −0·0138 | −0·0023 | 1516 |
| 1517 | Aquilae ... ... ... | 6·9 | ... | 01·72 | 3 | 19 52 6·18 | +3·0710 | −0·0035 | | 1517 |
| 1518 | Aquilae ... ... ... | 9·1 | 2 | 98·70 | 3 | 19 52 11·32 | +3·0028 | −0·0027 | | 1518 |
| 1519 | Aquilae ... ... ... | 9·5 | 2 | 99·60 | 3 | 19 52 47·05 | +3·1706 | −0·0048 | | 1519 |
| 1520 | Aquilae ... ... ... | 6·8 | ... | 98·72 | 3 | 19 53 39·79 | +3·0440 | −0·0032 | | 1520 |
| 1521 | Aquilae ... ... ... | 6·7 | 2 | 98·66 | 3 | 19 54 17·55 | +3·0501 | −0·0033 | | 1521 |
| 1522 | 12 Sagittae ... ... $\gamma$ | 3·7 | ... | 99·51 | 3 | 19 54 18·46 | +2·6635 | +0·0003 | +0·0030 | 1522 |
| 1523 | Aquilae ... ... ... | 7·3 | 1 | 97·34 | 3 | 19 55 20·34 | +3·0102 | −0·0028 | | 1523 |
| 1524 | Aquilae ... ... ... | 9·0 | 1 | 98·67 | 3 | 19 55 52·80 | +2·8906 | −0·0016 | | 1524 |
| 1525 | Aquilae ... ... ... | 10·8 | 3 | 99·62 | 3 | 19 55 54·25 | +3·1830 | −0·0051 | | 1525 |
| 1526 | 62 Sagittarii ... ... $c$ | 4·6 | ... | 98·51 | 6 | 19 56 30·57 | +3·6933 | −0·0147 | +0·0004 | 1526 |
| 1527 | Aquilae ... ... ... | 7·6 | 4 | 97·41 | 4 | 19 56 49·06 | +2·9821 | −0·0025 | | 1527 |
| 1528 | 15 Vulpeculae ... ... | 4·6 | ... | 99·68 | 3 | 19 56 58·92 | +2·4661 | +0·0012 | +0·0029 | 1528 |
| 1529 | Aquilae ... ... ... | 10·0 | 1 | 99·62 | 5 | 19 57 53·71 | +3·1758 | −0·0051 | | 1529 |
| 1530 | Aquilae ... ... ... | 6·5 | 4 | 97·29 | 5 | 19 58 14·36 | +2·9822 | −0·0025 | | 1530 |

1486. Yellowish-red. 1488. Reddish-orange. 1504, 1527, 1530. Reddish. 1510. Reddish. Companion, magnitude 9·7, follows south. 1511. The limits of magnitude are 3·5 and 4·7; the period is 7 days. 1512. 1896 Sept. 23, Brighter than No. 1510. The magnitude given for No. 1512 in Albany Catalogue is 6·0. 1522. Orange. 1525. A star slightly brighter precedes $13^s$ and is south. There is another star of about same R.A. as No. 1525, 1′ north.

| No. | Mean Year and Fraction of Year. | Number of Observations. | Mean N.P.D. | Precess. | Sec. Var. | Proper Motion. | Auwers' Bradley, 1755. | Lalande, 1800. | Weisse's Bessel (1), 1825. | Albany (A. G.), 1875. | Radcliffe, 1890. | Greenwich, 1890. | B.D. | No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ° ′ ″ | ″ | ″ | ″ | | | | | | | ° | |
| 1486 | 96·94 | 3 | 85 11 6·4 | −7·527 | −0·398 | | | 36997 | 648 | 6743 | | | +4 4152 | 1486 |
| 1487 | 97·97 | 3 | 86 27 15·3 | −7·562 | −0·401 | | | | 661 | 6746 | | | +3 4065 | 1487 |
| 1488 | 98·70 | 3 | 84 44 58·0 | −7·580 | −0·396 | | | 37019 | 668 | 6747 | | | +5 4190 | 1488 |
| 1489 | 01·60 | 3 | 82 50 0·4 | −7·609 | −0·390 | +0·133 | 2479 | 37044 | | | 5209 | 4992 | +7 4132 | 1489 |
| 1490 | 98·29 | 3 | 87 18 27·1 | −7·706 | −0·403 | −0·099 | | 37085 | 703 | 6755 | | | +2 3932 | 1490 |
| 1491 | 00·67 | 3 | 115 6 16·1 | −7·724 | −0·488 | +0·024 | 2478 | 37051 | | | 5218 | 5004 | | 1491 |
| 1492 | 99·65 | 3 | 89 58 14·7 | −7·746 | −0·410 | | | 37111 | 713 | | 5221 | | −0 3789 | 1492 |
| 1493 | 98·54 | 6 | 20 30 32·0 | −7·879 | +0·032 | +1·766 | 2505 | | | | 5237 | 5026 | +69 1053 | 1493 |
| 1494 | 98·28 | 3 | 118 49 58·9 | −7·891 | −0·499 | | | 37147 | | | | 5019 | | 1494 |
| 1495 | 98·71 | 3 | 89 52 51·4 | −7·935 | −0·408 | | | 37227 | 780 | | 5239 | | +0 4265 | 1495 |
| 1496 | 96·65 | 4 | 86 50 44·2 | −7·981 | −0·399 | | | 37262 | | 6770 | | | +3 4097 | 1496 |
| 1497 | 02·62 | 3 | 113 39 19·4 | −7·981 | −0·479 | +0·046 | 2486 | 37211 | | | 5243 | 5033 | | 1497 |
| 1498 | 02·62 | 3 | 113 39 28·1 | −8·004 | −0·479 | −0·007 | 2488 | 37225 | | | 5246 | 5036 | | 1498 |
| 1499 | 98·65 | 3 | 84 49 48·0 | −8·017 | −0·392 | −0·004 | 2492 | 37279 | 819 | 6780 | 5251 | 5040 | +5 4225 | 1499 |
| 1500 | 02·73 | 3 | 106 31 20·5 | −8·075 | −0·455 | +0·039 | 2490 | 37277 | | | 5253 | 5043 | −16 5399 | 1500 |
| 1501 | 99·62 | 3 | 88 38 49·1 | −8·268 | −0·401 | +0·080 | | 37411 | 904 | 6798 | | | +1 4075 | 1501 |
| 1502 | 96·61 | 3 | 85 15 37·8 | −8·441 | −0·390 | | | 37504 | 958 | 6825 | | | +4 4210 | 1502 |
| 1503 | 97·64 | 3 | 85 59 38·4 | −8·551 | −0·390 | | | 37571 | | 6837 | | | +3 4138 | 1503 |
| 1504 | 98·36 | 3 | 79 37 49·6 | −8·594 | −0·372 | −0·008 | 2511 | 37598 | 1007 | | 5283 | 5087 | +10 4043 | 1504 |
| 1505 | 98·64 | 3 | 89 9 3·7 | −8·670 | −0·398 | +0·260 | | 37626 | 1022 | | | | +0 4314 | 1505 |
| 1506 | 98·96 | 4 | 71 42 45·2 | −8·706 | −0·348 | −0·031 | 2516 | 37671 | | | 5292 | 5102 | +18 4240 | 1506 |
| 1507 | 99·63 | 3 | 87 17 50·4 | −8·844 | −0·391 | | | 37722 | 1078 | 6858 | | | +2 4000 | 1507 |
| 1508 | 98·67 | 3 | 89 24 32·7 | −8·933 | −0·396 | | | 37762 | 1107 | | | | +0 4331 | 1508 |
| 1509 | 00·67 | 3 | 81 23 44·9 | −8·939 | −0·374 | −0·384 | 2524 | 37771 | 1111 | | 5304 | 5123 | +8 4236 | 1509 |
| 1510 | 98·67 | 3 | 86 9 56·9 | −8·983 | −0·386 | | | 37791 | 1120 | 6873 | | | +3 4172 | 1510 |
| 1511 | 98·72 | 3 | 89 15 3·3 | −9·055 | −0·394 | +0·003 | 2526 | 37812 | 1144 | | | | +0 4337 | 1511 |
| 1512 | 96·61 | 3 | 85 51 30·3 | −9·135 | −0·384 | | | 37855 | 1167 | 6887 | | | +4 4264 | 1512 |
| 1513 | 99·67 | 3 | 89 59 16·1 | −9·230 | −0·394 | +0·015 | 2535 | 37896 | 1202 | | 5325 | | −0 3871 | 1513 |
| 1514 | 97·63 | 3 | 116 33 52·1 | −9·237 | −0·471 | −0·093 | 2528 | 37861 | | | | 5144 | | 1514 |
| 1515 | 02·59 | 3 | 83 50 34·7 | −9·290 | −0·377 | +0·473 | 2538 | 37938 | 1222 | | 5327 | 5150 | +6 4357 | 1515 |
| 1516 | 98·34 | 3 | 117 26 5·0 | −9·322 | −0·472 | +0·024 | 2533 | 37902 | | | | 5154 | | 1516 |
| 1517 | 01·72 | 3 | 89 54 53·0 | −9·422 | −0·391 | | | 38017 | 1253 | | 5332 | | −0 3881 | 1517 |
| 1518 | 98·70 | 3 | 86 36 25·5 | −9·429 | −0·382 | | | | | | | | +3 4207 | 1518 |
| 1519 | 99·60 | 3 | 94 44 54·7 | −9·475 | −0·403 | | | | | | | | −4 4980 | 1519 |
| 1520 | 98·72 | 3 | 88 36 10·1 | −9·542 | −0·386 | | | 38047 | 1286 | 6927 | | | +1 4159 | 1520 |
| 1521 | 98·66 | 3 | 88 53 45·0 | −9·591 | −0·386 | | | | 1305 | 6931 | | | +0 4375 | 1521 |
| 1522 | 98·60 | 7 | 70 46 46·1 | −9·592 | −0·337 | −0·037 | 2550 | 38135 | | | 5347 | 5188 | +19 4229 | 1522 |
| 1523 | 97·34 | 3 | 86 56 29·5 | −9·671 | −0·380 | | | 38158 | 1331 | 6944 | | | +2 4058 | 1523 |
| 1524 | 98·67 | 3 | 81 9 3·5 | −9·712 | −0·365 | | | | | | | | +8 4298 | 1524 |
| 1525 | 99·62 | 3 | 95 23 21·6 | −9·714 | −0·402 | | | | | | | | | 1525 |
| 1526 | 02·59 | 3 | 117 59 16·7 | −9·760 | −0·466 | −0·024 | 2549 | 38159 | | | 5360 | 5203 | | 1526 |
| 1527 | 98·01 | 3 | 85 33 34·9 | −9·784 | −0·375 | | | 38226 | 1379 | 6956 | | | +4 4314 | 1527 |
| 1528 | 01·45 | 8 | 62 31 22·2 | −9·796 | −0·310 | −0·026 | 2558 | 38260 | | | | | +27 3587 | 1528 |
| 1529 | 99·62 | 3 | 95 3 42·3 | −9·866 | −0·399 | | | | | | | | | 1529 |
| 1530 | 97·69 | 3 | 85 32 59·1 | −9·893 | −0·374 | | | 38281 | 1408 | 6959 | | | +4 4325 | 1530 |

1490, 1501. Authority for Proper Motions: Boss. 1491. Authority for Proper Motions: Auwers (Astronomische Nachrichten, 3929). 1505. Authority for Proper Motions: Porter.

| No. | Constellation. | Magnitude. | Number of Estimations. | Mean Year and Fraction of Year. | Number of Observations. | Mean R.A. | Precess. | Sec. Var. | Proper Motion. | No. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | h. m. s. | s. | s. | s. | |
| 1531 | Aquilae ... ... ... | 7·0 | 2 | 98·69 | 3 | 20 0 6·57 | +3·0356 | −0·0032 | 0·0000 | 1531 |
| 1532 | Aquilae ... ... ... | 7·0 | 1 | 98·69 | 3 | 20 0 13·47 | +3·0693 | −0·0037 | | 1532 |
| 1533 | Sagittae ... ... ... | 8·9* | ... | 98·68 | 3 | 20 0 40·45 | +2·6438 | +0·0005 | | 1533 |
| 1534 | Aquilae ... ... ... | 7·3 | 5 | 97·16 | 4 | 20 0 57·82 | +2·9821 | −0·0026 | | 1534 |
| 1535 | Aquilae ... ... ... | 7·6 | 5 | 97·70 | 3 | 20 2 39·08 | +2·9826 | −0·0026 | | 1535 |
| 1536 | Aquilae ... ... ... | 7·0 | 1 | 97·66 | 3 | 20 2 40·79 | +3·0295 | −0·0032 | | 1536 |
| 1537 | 65 Aquilae ... ... $\theta$ | 3·3 | ... | 98·93 | 17 | 20 6 8·71 | +3·0950 | −0·0042 | −0·0001 | 1537 |
| 1538 | Aquilae ... ... ... | 7·4† | ... | 98·69 | 3 | 20 7 29·05 | +3·0614 | −0·0038 | | 1538 |
| 1539 | Aquilae ... ... ... | 7·1† | ... | 98·71 | 3 | 20 7 29·09 | +3·0614 | −0·0038 | | 1539 |
| 1540 | 67 Aquilae ... ... $\rho$ | 4·9 | ... | 01·70 | 3 | 20 9 38·95 | +2·7726 | −0·0004 | +0·0028 | 1540 |
| 1541 | Aquilae ... ... ... | 7·3 | 1 | 97·32 | 3 | 20 9 52·31 | +3·0116 | −0·0031 | | 1541 |
| 1542 | Aquilae ... ... ... | 7·0 | 2 | 98·64 | 3 | 20 10 30·05 | +3·0227 | −0·0033 | | 1542 |
| 1543 | Aquilae ... ... ... | 6·7 | 3 | 97·39 | 3 | 20 11 7·50 | +2·9887 | −0·0028 | | 1543 |
| 1544 | 23 Vulpeculae ... ... | 4·7 | ... | 00·69 | 3 | 20 11 37·43 | +2·4883 | +0·0015 | −0·0046 | 1544 |
| 1545 | 6 Capricorni ... ... $a^2$ | 3·8 | ... | 98·94 | 11 | 20 12 30·37 | +3·3282 | −0·0085 | +0·0022 | 1545 |
| 1546 | Aquilae ... ... ... | 7·0 | ... | 98·64 | 3 | 20 13 30·56 | +3·0663 | −0·0040 | | 1546 |
| 1547 | 9 Capricorni ... ... $\beta$ | 3·2 | ... | 99·12 | 9 | 20 15 23·57 | +3·3722 | −0·0096 | +0·0008 | 1547 |
| 1548 | Aquilae ... ... ... | 5·9 | 2 | 96·98 | 3 | 20 18 13·38 | +2·9760 | −0·0027 | | 1548 |
| 1549 | Aquilae ... ... ... | 6·3 | 1 | 98·66 | 3 | 20 19 31·78 | +3·0585 | −0·0040 | | 1549 |
| 1550 | Aquilae ... ... ... | 7·2 | ... | 99·61 | 3 | 20 19 35·99 | +2·9732 | −0·0027 | | 1550 |
| 1551 | Aquilae ... ... ... | 6·9 | 2 | 98·05 | 3 | 20 19 36·65 | +3·0527 | −0·0039 | | 1551 |
| 1552 | Aquilae ... ... ... | 7·0 | 1 | 98·68 | 3 | 20 21 13·00 | +3·0226 | −0·0034 | | 1552 |
| 1553 | 11 Capricorni ... ... $\rho$ | 5·0 | ... | 97·55 | 6 | 20 23 9·45 | +3·4281 | −0·0115 | −0·0028 | 1553 |
| 1554 | Aquilae ... ... ... | 6·9 | 2 | 98·69 | 3 | 20 23 14·31 | +3·0234 | −0·0035 | | 1554 |
| 1555 | Aquilae ... ... ... | 7·3 | 1 | 98·70 | 3 | 20 23 29·97 | +3·0623 | −0·0041 | | 1555 |
| 1556 | Aquilae ... ... ... | 7·0 | ... | 99·69 | 3 | 20 24 42·70 | +3·0226 | −0·0035 | | 1556 |
| 1557 | 41 Cygni ... ... ... ... | 4·1 | ... | 99·49 | 3 | 20 25 18·48 | +2·4501 | +0·0020 | +0·0005 | 1557 |
| 1558 | Capricorni ... ... ... | 7·2 | ... | 98·02 | 3 | 20 26 21·79 | +3·5780 | −0·0157 | | 1558 |
| 1559 | Aquilae ... ... ... | 7·1 | ... | 99·63 | 3 | 20 26 43·89 | +2·9963 | −0·0031 | | 1559 |
| 1560 | Capricorni ... ... ... | 6·2 | ... | 97·75 | 3 | 20 26 55·05 | +3·5787 | −0·0158 | | 1560 |
| 1561 | Aquilae ... ... ... | 7·2 | 2 | 98·65 | 3 | 20 27 14·08 | +3·0376 | −0·0037 | | 1561 |
| 1562 | Aquilae ... ... ... | 6·8 | 3 | 98·36 | 3 | 20 27 16·44 | +3·0392 | −0·0038 | | 1562 |
| 1563 | 2 Delphini ... ... $\epsilon$ | 3·9 | ... | 99·18 | 6 | 20 28 26·09 | +2·8662 | −0·0012 | −0·0006 | 1563 |
| 1564 | Aquarii ... ... ... | 7·0 | 1 | 97·32 | 3 | 20 29 1·18 | +2·9879 | −0·0030 | | 1564 |
| 1565 | Aquarii ... ... ... | 7·3 | 1 | 97·31 | 3 | 20 31 39·48 | +3·0331 | −0·0037 | | 1565 |
| 1566 | 6 Delphini ... ... $\beta$ | 3·7 | ... | 99·42 | 4 | 20 32 51·52 | +2·8060 | −0·0004 | +0·0057 | 1566 |
| 1567 | 1 Aquarii ... ... ... | 5·4 | ... | 99·64 | 3 | 20 34 17·36 | +3·0702 | −0·0044 | +0·0050 | 1567 |
| 1568 | Aquarii ... ... ... | 8·4* | ... | 99·70 | 3 | 20 34 33·20 | +2·9884 | −0·0030 | +0·0570 | 1568 |
| 1569 | 9 Delphini ... ... $a$ | 3·8 | ... | 98·59 | 15 | 20 34 59·55 | +2·7824 | −0·0001 | +0·0031 | 1569 |
| 1570 | Aquarii ... ... ... | 7·0 | 1 | 98·04 | 3 | 20 35 15·81 | +3·0166 | −0·0035 | | 1570 |
| 1571 | Delphini ... ... ... | 7·4 | 2 | 98·05 | 3 | 20 38 41·92 | +2·9822 | −0·0029 | | 1571 |
| 1572 | 11 Delphini ... ... $\delta$ | 4·5 | ... | 99·44 | 3 | 20 38 47·39 | +2·8026 | −0·0002 | −0·0025 | 1572 |
| 1573 | 16 Capricorni ... ... $\psi$ | 4·2 | ... | 95·69 | 4 | 20 40 10·46 | +3·5637 | −0·0169 | −0·0061 | 1573 |
| 1574 | Aquarii ... ... V | Var. | 2 | 99·68 | 4 | 20 41 46·02 | +3·0359 | −0·0038 | | 1574 |
| 1575 | 2 Aquarii ... ... $\epsilon$ | 3·6 | ... | 98·56 | 8 | 20 42 15·73 | +3·2493 | −0·0084 | −0·0002 | 1575 |

1533. Red. 1535. Reddish. 1538, 1539. Double. Components of nearly equal magnitude; 1538, observed as one mass; 1539, brighter and north following observed. 1553. Companion follows. 1562. A star (Albany 7159), magnitude 9·1, follows $3^s$ and is slightly south. 1571. Albany magnitude, 6·0 (3 estimations). 1574. 1899 Aug. 24, mag. 8; 1899 Sept. 2, mag. 8·2. Chandler's limits are 8·1 and 9·3; the period is 240 days. A star, mag. 9·2, follows about $5^s$ and is north.

| No. | Mean Year and Fraction of Year. | Number of Observations. | Mean N.P.D. | Precess. | Sec. Var. | Proper Motion. | Auwers' Bradley, 1755. | Lalande, 1800. | Weisse's Bessel (1), 1825. | Albany (A. G.), 1875. | Radcliffe, 1890. | Greenwich, 1890. | B.D. | No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ° ′ ″ | ″ | ″ | ″ | | | | | | | ° | |
| 1531 | 98·69 | 3 | 88 9 44·2 | −10·034 | −0·379 | +0·141 | | 38371 | 1453 | 6973 | | | +1 4196 | 1531 |
| 1532 | 98·69 | 3 | 89 49 45·8 | −10·043 | −0·383 | | | 38374 | 1456 | | 5381 | | +0 4411 | 1532 |
| 1533 | 98·68 | 3 | 69 38 10·3 | −10·077 | −0·329 | | | | | | | | +20 4417 | 1533 |
| 1534 | 97·34 | 3 | 85 30 35·4 | −10·099 | −0·371 | | | 38402 | 1480 | 6981 | | | +4 4341 | 1534 |
| 1535 | 97·70 | 3 | 85 31 2·7 | −10·226 | −0·370 | | | 38475 | 1518 | 6994 | | | +4 4349 | 1535 |
| 1536 | 97·66 | 3 | 87 50 46·5 | −10·228 | −0·376 | | | 38470 | 1515 | 6995 | | | +2 4093 | 1536 |
| 1537 | 01·63 | 3 | 91 7 4·7 | −10·488 | −0·380 | −0·014 | 2576 | 38627 | 63 | | 5413 | 5279 | −1 3911 | 1537 |
| 1538 | 98·69 | 3 | 89 25 54·8 | −10·588 | −0·375 | | | | 105 | | | | +0 4444 | 1538 |
| 1539 | 98·71 | 3 | 89 25 52·9 | −10·588 | −0·375 | | | | 105 | | | 5292 | +0 4444 | 1539 |
| 1540 | 99·08 | 3 | 75 6 25·0 | −10·748 | −0·337 | −0·081 | 2590 | 38818 | | | | 5316 | +14 4227 | 1540 |
| 1541 | 97·32 | 3 | 86 53 50·8 | −10·765 | −0·366 | | | 38807 | 169 | 7042 | | | +2 4121 | 1541 |
| 1542 | 98·64 | 3 | 87 27 31·8 | −10·811 | −0·367 | | | 38842 | | 7047 | | | +2 4124 | 1542 |
| 1543 | 97·39 | 3 | 85 43 26·5 | −10·857 | −0·362 | | | 38862 | 199 | 7050 | | | +4 4395 | 1543 |
| 1544 | 01·01 | 13 | 62 29 33·2 | −10·894 | −0·300 | −0·010 | 2602 | 38939 | | | 5444 | 5342 | +27 3666 | 1544 |
| 1545 | 98·00 | 3 | 102 51 16·9 | −10·958 | −0·402 | −0·017 | 2595 | 38898 | 223 | | 5449 | 5349 | −12 5685 | 1545 |
| 1546 | 98·64 | 3 | 89 40 13·4 | −11·032 | −0·369 | | | 38971 | 256 | | 5455 | | +0 4475 | 1546 |
| 1547 | 98·26 | 5 | 105 5 49·6 | −11·169 | −0·404 | −0·022 | 2609 | 39035 | | | 5466 | 5393 | −15 5629 | 1547 |
| 1548 | 96·98 | 3 | 84 58 35·8 | −11·374 | −0·353 | | | 39176 | 392 | 7096 | | 5408 | +4 4434 | 1548 |
| 1549 | 98·66 | 3 | 89 15 18·5 | −11·468 | −0·361 | | | 39222 | | | | | +0 4495 | 1549 |
| 1550 | 99·61 | 3 | 84 48 49·7 | −11·473 | −0·351 | | | 39236 | 427 | 7105 | | | +5 4503 | 1550 |
| 1551 | 98·05 | 3 | 88 57 16·1 | −11·474 | −0·360 | | | 39230 | | 7104 | | | +0 4496 | 1551 |
| 1552 | 98·68 | 3 | 87 22 10·6 | −11·589 | −0·355 | | | 39312 | | 7115 | | | +2 4164 | 1552 |
| 1553 | 97·34 | 5 | 108 8 40·0 | −11·727 | −0·400 | +0·007 | 2626 | 39355 | | | 5501 | 5445 | −18 5689 | 1553 |
| 1554 | 98·69 | 3 | 87 23 37·7 | −11·732 | −0·353 | | | | | 7126 | | | +2 4175 | 1554 |
| 1555 | 98·70 | 3 | 89 26 50·5 | −11·751 | −0·357 | | | 39391 | 527 | | | | +0 4515 | 1555 |
| 1556 | 99·69 | 3 | 87 20 14·2 | −11·837 | −0·351 | | | 39403 | 555 | 7134 | | | +2 4179 | 1556 |
| 1557 | 01·54 | 9 | 59 57 55·4 | −11·879 | −0·283 | +0·001 | 2637 | 39502 | | | | 5467 | +29 4057 | 1557 |
| 1558 | 98·02 | 3 | 115 12 29·4 | −11·953 | −0·414 | | | 39471 | | | | | | 1558 |
| 1559 | 99·63 | 3 | 85 55 18·6 | −11·979 | −0·345 | | | 39525 | 608 | 7152 | | | +3 4356 | 1559 |
| 1560 | 97·75 | 3 | 115 16 52·4 | −11·992 | −0·413 | | | 39493 | | | | 5480 | | 1560 |
| 1561 | 98·65 | 3 | 88 7 6·5 | −12·014 | −0·349 | | | 39540 | 620 | 7157 | | | +1 4309 | 1561 |
| 1562 | 98·36 | 3 | 88 12 21·1 | −12·017 | −0·350 | | | 39542 | 622 | 7158 | | | +1 4310 | 1562 |
| 1563 | 99·35 | 3 | 79 2 11·3 | −12·098 | −0·328 | +0·022 | 2642 | 39607 | 658 | | 5529 | 5492 | +10 4321 | 1563 |
| 1564 | 97·32 | 3 | 85 26 34·2 | −12·139 | −0·342 | | | 39625 | 673 | 7178 | | | +4 4486 | 1564 |
| 1565 | 97·31 | 3 | 87 51 4·0 | −12·322 | −0·344 | | | 39735 | 743 | 7197 | | | +1 4327 | 1565 |
| 1566 | 99·11 | 4 | 75 45 9·8 | −12·405 | −0·316 | +0·031 | 2656 | 39810 | 785 | | 5547 | 5536 | +14 4369 | 1566 |
| 1567 | 99·64 | 3 | 89 51 54·1 | −12·503 | −0·345 | +0·020 | 2661 | 39850 | | | 5557 | | −0 4064 | 1567 |
| 1568 | 99·70 | 3 | 85 22 58·1 | −12·521 | −0·335 | −0·050 | | 39866 | 821 | 7215 | | | +4 4510 | 1568 |
| 1569 | 99·69 | 3 | 74 26 26·7 | −12·551 | −0·311 | +0·002 | 2670 | 39907 | 845 | | 5563 | 5551 | +15 4222 | 1569 |
| 1570 | 98·04 | 3 | 86 54 45·8 | −12·569 | −0·337 | | | 39897 | 843 | 7223 | | | +2 4220 | 1570 |
| 1571 | 98·05 | 3 | 84 58 11·1 | −12·802 | −0·330 | | | 40029 | 933 | 7244 | | | +4 4529 | 1571 |
| 1572 | 00·58 | 6 | 75 17 3·2 | −12·808 | −0·309 | +0·036 | 2678 | 40036 | 945 | | | 5570 | +14 4403 | 1572 |
| 1573 | 95·69 | 4 | 115 37 50·4 | −12·901 | −0·392 | +0·154 | 2676 | 40039 | | | 5585 | 5572 | | 1573 |
| 1574 | 99·68 | 3 | 87 55 42·3 | −13·007 | −0·331 | | | | | 7261 | | | +1 4359 | 1574 |
| 1575 | 97·70 | 4 | 99 51 42·8 | −13·040 | −0·354 | +0·027 | 2681 | 40117 | 1014 | | 5593 | 5588 | −10 5506 | 1575 |

1531, 1568. Authority for Proper Motions: Porter.

| No. | Constellation. | Magnitude. | Number of Estimations. | Mean Year and Fraction of Year. | Number of Observations. | Mean R.A. | Precess. | Sec. Var. | Proper Motion. | No. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | h. m. s. | s. | s. | s. | |
| 1576 | Aquarii ... ... ... | 6·7 | 1 | 98·63 | 3 | 20 42 45·71 | +3·0207 | −0·0035 | | 1576 |
| 1577 | Aquarii ... ... ... | 7·0 | 1 | 98·70 | 3 | 20 43 6·50 | +3·0312 | −0·0037 | | 1577 |
| 1578 | Aquarii ... ... ... | 7·3 | 1 | 98·73 | 3 | 20 43 23·19 | +3·0148 | −0·0034 | | 1578 |
| 1579 | Aquarii ... ... ... | 7·4 | ... | 98·72 | 3 | 20 43 23·23 | +3·0488 | −0·0041 | | 1579 |
| 1580 | Vulpeculae... ... ... | 9·3* | ... | 98·12 | 3 | 20 43 52·65 | +2·6108 | +0·0019 | | 1580 |
| 1581 | Vulpeculae... ... ... | 9·2* | ... | 98·11 | 3 | 20 44 47·21 | +2·6125 | +0·0021 | −0·0170 | 1581 |
| 1582 | Equulei ... ... ... | 7·0 | 1 | 98·70 | 3 | 20 44 55·16 | +3·0365 | −0·0038 | | 1582 |
| 1583 | Equulei ... ... ... | 6·4 | 2 | 98·40 | 3 | 20 45 0·78 | +2·9818 | −0·0028 | | 1583 |
| 1584 | 6 Aquarii ... ... $\mu$ | 4·7 | ... | 99·11 | 7 | 20 47 15·59 | +3·2369 | −0·0083 | +0·0008 | 1584 |
| 1585 | 31 Vulpeculae... ... ... | 4·9 | ... | 99·26 | 3 | 20 47 50·82 | +2·5723 | +0·0024 | −0·0063 | 1585 |
| 1586 | Equulei ... ... ... | 7·7 | 1 | 97·35 | 3 | 20 47 53·98 | +3·0452 | −0·0040 | | 1586 |
| 1587 | Aquarii ... ... ... | 9·5 | 1 | 99·04 | 3 | 20 49 19·94 | +3·1821 | −0·0070 | | 1587 |
| 1588 | Equulei ... ... ... | 7·0 | 1 | 98·34 | 3 | 20 50 3·52 | +3·0481 | −0·0041 | | 1588 |
| 1589 | 32 Vulpeculae... ... ... | 5·3 | ... | 98·18 | 6 | 20 50 17·80 | +2·5564 | +0·0027 | −0·0016 | 1589 |
| 1590 | Equulei ... ... ... | 7·0 | 1 | 98·37 | 3 | 20 50 40·23 | +3·0014 | −0·0032 | | 1590 |
| 1591 | Equulei ... ... ... | 7·0 | 1 | 98·65 | 3 | 20 51 42·62 | +3·0499 | −0·0041 | −0·0037 | 1591 |
| 1592 | Aquarii ... ... ... | 6·6 | 2 | 00·70 | 3 | 20 52 3·52 | +3·0714 | −0·0046 | 0·0000 | 1592 |
| 1593 | Equulei ... ... ... | 6·9 | ... | 97·39 | 3 | 20 52 48·23 | +3·0078 | −0·0033 | | 1593 |
| 1594 | 1 Equulei ... ... ... | 5·4 | ... | 98·66 | 3 | 20 54 4·62 | +3·0065 | −0·0032 | −0·0100 | 1594 |
| 1595 | Equulei ... ... ... | 6·7 | ... | 97·35 | 3 | 20 57 40·50 | +3·0234 | −0·0035 | | 1595 |
| 1596 | Equulei ... ... ... | 7·3 | ... | 97·71 | 3 | 20 57 59·22 | +3·0511 | −0·0041 | | 1596 |
| 1597 | 3 Equulei ... ... ... | 5·9 | ... | 98·66 | 3 | 20 59 35·83 | +2·9881 | −0·0028 | 0·0000 | 1597 |
| 1598 | Equulei ... ... ... | 7·0 | 1 | 98·70 | 3 | 20 59 38·63 | +3·0307 | −0·0037 | | 1598 |
| 1599 | Equulei ... ... ... | 6·7 | 2 | 98·72 | 3 | 20 59 40·71 | +3·0418 | −0·0039 | | 1599 |
| 1600 | 23 Capricorni... ... $\theta$ | 4·1 | ... | 97·09 | 5 | 21 0 19·56 | +3·3727 | −0·0128 | +0·0040 | 1600 |
| 1601 | Equulei ... ... ... | 6·5 | 2 | 98·67 | 3 | 21 1 37·73 | +3·0170 | −0·0034 | | 1601 |
| 1602 | Aquarii ... ... ... | 6·9 | ... | 00·46 | 4 | 21 2 43·25 | +3·0605 | −0·0043 | | 1602 |
| 1603 | Equulei ... ... ... | 7·0 | 1 | 98·68 | 3 | 21 3 1·38 | +2·9952 | −0·0029 | | 1603 |
| 1604 | Equulei ... ... ... | 7·3 | 1 | 97·40 | 3 | 21 3 46·56 | +3·0503 | −0·0041 | | 1604 |
| 1605 | Equulei ... ... ... | 7·0 | 1 | 98·65 | 3 | 21 4 55·03 | +3·0318 | −0·0037 | | 1605 |
| 1606 | Equulei ... ... ... | 7·3 | 2 | 97·41 | 3 | 21 7 41·96 | +3·0371 | −0·0037 | | 1606 |
| 1607 | 64 Cygni ... ... $\zeta$ | 3·3 | ... | 98·56 | 8 | 21 8 40·74 | +2·5519 | +0·0039 | −0·0015 | 1607 |
| 1608 | Equulei ... ... ... | 7·3 | 2 | 98·69 | 3 | 21 9 30·46 | +3·0051 | −0·0030 | | 1608 |
| 1609 | 8 Equulei ... ... $\alpha$ | 4·2 | ... | 98·28 | 17 | 21 10 49·48 | +2·9967 | −0·0027 | +0·0021 | 1609 |
| 1610 | Equulei ... ... ... | 7·1 | 2 | 97·77 | 3 | 21 12 55·29 | +3·0343 | −0·0036 | | 1610 |
| 1611 | 5 Cephei ... ... $\alpha$ | 2·6 | ... | 99·11 | 3 | 21 16 11·52 | +1·4136 | −0·0072 | +0·0211 | 1611 |
| 1612 | Equulei ... ... ... | 7·2 | 1 | 97·10 | 3 | 21 16 18·84 | +3·0337 | −0·0036 | | 1612 |
| 1613 | Equulei ... ... ... | 7·3 | 2 | 97·77 | 3 | 21 16 20·27 | +3·0351 | −0·0036 | | 1613 |
| 1614 | 32 Capricorni... ... $\iota$ | 4·3 | ... | 98·12 | 10 | 21 16 40·75 | +3·3443 | −0·0129 | −0·0003 | 1614 |
| 1615 | Aquarii ... ... ... | 7·3 | 1 | 98·68 | 3 | 21 16 44·44 | +3·0584 | −0·0042 | | 1615 |
| 1616 | Equulei ... ... ... | 6·9 | 1 | 98·65 | 3 | 21 17 0·37 | +3·0129 | −0·0030 | | 1616 |
| 1617 | Equulei ... ... ... | 6·8 | 2 | 97·42 | 3 | 21 17 32·42 | +3·0349 | −0·0035 | | 1617 |
| 1618 | Equulei ... ... ... | 7·3 | 1 | 97·43 | 3 | 21 18 19·98 | +3·0373 | −0·0036 | | 1618 |
| 1619 | Aquarii ... ... ... | 7·2 | 2 | 98·41 | 3 | 21 18 41·55 | +3·0538 | −0·0040 | | 1619 |
| 1620 | Aquarii ... ... ... | 6·5 | 1 | 00·73 | 3 | 21 20 44·31 | +3·0712 | −0·0045 | | 1620 |

1589. Orange-red. 1590. Close double; brighter observed. Companion, magnitude 8·3, precedes north.
1594. Wide double. The companion, one magnitude fainter, follows north. 1608. Reddish. 1610. B.D. magnitude, 8·2; Albany, 7·3.

| No. | Mean Year and Fraction of Year. | Number of Observations. | Mean N.P.D. | Precess. | Sec. Var. | Proper Motion. | Auwers' Bradley, 1755. | Lalande, 1800. | Weisse's Bessel(1), 1825. | Albany (A.G.), 1875. | Radcliffe, 1890. | Greenwich, 1890. | B.D. | No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ° ′ ″ | ″ | ″ | ″ | | | | | | | ° | |
| 1576 | 98·63 | 3 | 87 3 41·0 | −13·073 | −0·328 | | | | 1034 | 7269 | | | +2 4250 | 1576 |
| 1577 | 98·70 | 3 | 87 39 8·4 | −13·097 | −0·329 | | | | | 7270 | | | +2 4253 | 1577 |
| 1578 | 98·73 | 3 | 86 43 11·2 | −13·115 | −0·327 | | | 40164 | 1057 | 7273 | | | +3 4430 | 1578 |
| 1579 | 98·72 | 3 | 88 38 42·1 | −13·115 | −0·331 | | | | 1055 | 7271 | | | +1 4369 | 1579 |
| 1580 | 98·12 | 3 | 65 24 32·5 | −13·147 | −0·282 | | | | | | | | +24 4246 | 1580 |
| 1581 | 98·11 | 3 | 65 24 58·8 | −13·208 | −0·281 | +0·240 | | | | | | | +24 4251 | 1581 |
| 1582 | 98·70 | 3 | 87 56 14·9 | −13·216 | −0·327 | | | 40218 | 1094 | 7288 | | | +1 4374 | 1582 |
| 1583 | 98·40 | 3 | 84 49 38·1 | −13·222 | −0·321 | | | 40229 | | 7289 | | | +5 4626 | 1583 |
| 1584 | 98·33 | 3 | 99 21 30·3 | −13·369 | −0·346 | +0·031 | 2696 | | 1146 | | 5618 | 5627 | −9 5598 | 1584 |
| 1585 | 98·82 | 4 | 63 16 38·7 | −13·408 | −0·273 | +0·074 | 2703 | 40357 | | | | | +26 4017 | 1585 |
| 1586 | 97·35 | 3 | 88 24 44·4 | −13·411 | −0·324 | | | | 1165 | 7314 | | | +1 4386 | 1586 |
| 1587 | 99·04 | 3 | 96 19 0·6 | −13·504 | −0·337 | | | | | | | | −6 5622 | 1587 |
| 1588 | 98·34 | 3 | 88 34 2·9 | −13·551 | −0·322 | | | 40415 | 1221 | 7332 | | | +1 4393 | 1588 |
| 1589 | 98·32 | 3 | 62 19 21·3 | −13·566 | −0·269 | +0·002 | 2709 | 40456 | | | 5633 | 5651 | +27 3911 | 1589 |
| 1590 | 98·37 | 3 | 85 50 57·0 | −13·590 | −0·316 | | | 40444 | 1232 | 7335 | | | +3 4461 | 1590 |
| 1591 | 98·65 | 3 | 88 39 46·5 | −13·657 | −0·320 | +0·226 | | 40484 | 1264 | 7339 | | | +1 4397 | 1591 |
| 1592 | 00·70 | 3 | 89 55 8·3 | −13·679 | −0·322 | +0·119 | | 40496 | 1269 | | 5641 | | −0 4132 | 1592 |
| 1593 | 97·39 | 3 | 86 11 24·2 | −13·727 | −0·314 | | | 40534 | | 7347 | | | +3 4466 | 1593 |
| 1594 | 98·66 | 3 | 86 5 23·7 | −13·808 | −0·312 | +0·139 | 2717 | 40578 | 1328 | 7352 | | 5678 | +3 4473 | 1594 |
| 1595 | 97·35 | 3 | 87 2 35·8 | −14·035 | −0·309 | | | 40739 | 1414 | 7372 | | | +2 4289 | 1595 |
| 1596 | 97·71 | 3 | 88 42 0·3 | −14·054 | −0·311 | | | 40750 | 1426 | 7374 | | | +1 4413 | 1596 |
| 1597 | 98·66 | 3 | 84 53 40·1 | −14·154 | −0·303 | +0·007 | 2734 | 40808 | | 7386 | | | +4 4606 | 1597 |
| 1598 | 98·70 | 3 | 87 27 19·4 | −14·157 | −0·307 | | | 40804 | 1464 | 7387 | | | +2 4297 | 1598 |
| 1599 | 98·72 | 3 | 88 7 33·2 | −14·159 | −0·308 | | | 40806 | | 7389 | | 5723 | +1 4418 | 1599 |
| 1600 | 96·42 | 3 | 107 37 49·4 | −14·199 | −0·341 | +0·054 | 2733 | 40814 | | | 5675 | 5726 | −17 6174 | 1600 |
| 1601 | 98·67 | 3 | 86 35 56·7 | −14·279 | −0·303 | | | 40886 | 1512 | 7397 | | | +3 4501 | 1601 |
| 1602 | 00·89 | 5 | 89 14 51·4 | −14·346 | −0·306 | | | 40926 | 1540 | | | | +0 4663 | 1602 |
| 1603 | 98·68 | 3 | 85 15 4·1 | −14·365 | −0·299 | | | 40944 | 1550 | 7406 | | | +4 4615 | 1603 |
| 1604 | 97·40 | 3 | 88 37 0·2 | −14·411 | −0·303 | | | 40977 | 1570 | 7408 | | | +1 4431 | 1604 |
| 1605 | 98·65 | 3 | 87 27 48·1 | −14·480 | −0·300 | | | 41018 | | 7415 | | | +2 4311 | 1605 |
| 1606 | 97·41 | 3 | 87 46 3·0 | −14·647 | −0·296 | | | 41136 | | 7429 | | | +2 4319 | 1606 |
| 1607 | 02·06 | 10 | 60 11 0·2 | −14·706 | −0·247 | +0·066 | 2760 | 41215 | | | 5721 | 5775 | +29 4348 | 1607 |
| 1608 | 98·69 | 3 | 85 43 26·2 | −14·755 | −0·290 | | | 41222 | 135 | 7438 | | | +4 4631 | 1608 |
| 1609 | 97·38 | 5 | 85 9 56·4 | −14·833 | −0·288 | +0·078 | 2764 | 41274 | 170 | 7447 | 5736 | 5788 | +4 4635 | 1609 |
| 1610 | 97·77 | 3 | 87 31 39·0 | −14·956 | −0·288 | | | 41352 | | 7462 | | | +2 4333 | 1610 |
| 1611 | 99·11 | 3 | 27 50 17·4 | −15·145 | −0·129 | −0·025 | 2786 | | | | 5761 | 5811 | +61 2111 | 1611 |
| 1612 | 97·10 | 3 | 87 27 0·2 | −15·152 | −0·283 | | | 41485 | 314 | 7473 | | | +2 4345 | 1612 |
| 1613 | 97·77 | 3 | 87 32 15·2 | −15·153 | −0·283 | | | 41486 | 315 | 7474 | | | +2 4346 | 1613 |
| 1614 | 97·92 | 5 | 107 15 38·0 | −15·172 | −0·312 | −0·013 | 2772 | 41474 | | | 5764 | 5814 | −17 6245 | 1614 |
| 1615 | 98·68 | 3 | 89 3 47·5 | −15·176 | −0·285 | | | 41500 | 326 | | | | +0 4714 | 1615 |
| 1616 | 98·65 | 3 | 86 4 47·4 | −15·191 | −0·280 | | | 41508 | | 7481 | | | +3 4551 | 1616 |
| 1617 | 97·42 | 3 | 87 30 28·8 | −15·222 | −0·282 | | | 41533 | 347 | 7486 | | 5823 | +2 4348 | 1617 |
| 1618 | 97·43 | 3 | 87 39 40·3 | −15·267 | −0·281 | | | 41561 | 362 | 7492 | | | +2 4350 | 1618 |
| 1619 | 98·41 | 3 | 88 44 52·0 | −15·287 | −0·282 | | | 41575 | 367 | 7494 | | | +1 4471 | 1619 |
| 1620 | 00·73 | 3 | 89 53 51·8 | −15·402 | −0·280 | | | 41655 | 420 | | 5783 | | −0 4215 | 1620 |

1581. The Proper Motions have been specially computed for the present catalogue.

1591. The Proper Motion adopted is the mean of Porter and Boss.

1592. Authority for Proper Motions: Bossert.

| No. | Constellation. | Magnitude. | Number of Estimations. | Mean Year and Fraction of Year. | Number of Observations. | Mean R.A. | Precess. | Sec. Var. | Proper Motion. | No. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | h. m. s. | s. | s. | s. | |
| 1621 | Aquarii ... ... ... | 6·9 | 3 | 98·38 | 3 | 21 21 21·20 | +3·0627 | −0·0042 | +0·0074 | 1621 |
| 1622 | Equulei ... ... ... | 6·7 | ... | 97·08 | 3 | 21 22 17·45 | +2·9991 | −0·0026 | | 1622 |
| 1623 | Equulei ... ... ... | 7·4 | ... | 01·74 | 3 | 21 22 59·24 | +3·0321 | −0·0034 | | 1623 |
| 1624 | 2 Pegasi ... ... ... | 4·8 | ... | 00·50 | 3 | 21 25 25·02 | +2·7149 | +0·0034 | +0·0011 | 1624 |
| 1625 | Equulei ... ... ... | 7·3 | 1 | 98·37 | 3 | 21 26 16·15 | +3·0237 | −0·0031 | | 1625 |
| 1626 | 22 Aquarii ... ... $\beta$ | 3·0 | ... | 98·36 | 18 | 21 26 17·63 | +3·1602 | −0·0071 | −0·0006 | 1626 |
| 1627 | Equulei ... ... ... | 7·7 | 1 | 96·79 | 3 | 21 28 9·47 | +3·0135 | −0·0028 | | 1627 |
| 1628 | Cygni ... ... ... ... | 8·0* | ... | 01·73 | 3 | 21 29 31·62 | +2·4333 | +0·0067 | | 1628 |
| 1629 | Aquarii ... ... ... | 6·7 | 1 | 98·08 | 3 | 21 29 37·48 | +3·0530 | −0·0038 | −0·0003 | 1629 |
| 1630 | Aquarii ... ... ... | 7·4 | 2 | 98·68 | 3 | 21 30 17·38 | +3·0652 | −0·0042 | | 1630 |
| 1631 | 72 Cygni ... ... ... ... | 5·0 | ... | 00·71 | 3 | 21 30 41·36 | +2·4375 | +0·0067 | +0·0095 | 1631 |
| 1632 | 23 Aquarii ... ... $\xi$ | 4·8 | ... | 98·23 | 12 | 21 32 25·70 | +3·1898 | −0·0082 | +0·0058 | 1632 |
| 1633 | Equulei ... ... ... | 6·9 | ... | 97·38 | 3 | 21 32 28·02 | +3·0133 | −0·0026 | | 1633 |
| 1634 | 74 Cygni ... ... ... ... | 5·0 | ... | 99·72 | 3 | 21 32 56·31 | +2·4022 | +0·0073 | −0·0010 | 1634 |
| 1635 | 4 Pegasi ... ... ... | 6·3 | 1 | 98·40 | 3 | 21 33 31·38 | +2·9985 | −0·0022 | +0·0056 | 1635 |
| 1636 | 25 Aquarii ... ... $d$ | 5·5 | 1 | 98·70 | 3 | 21 34 28·89 | +3·0479 | −0·0036 | −0·0030 | 1636 |
| 1637 | Aquarii ... ... ... | 8·3 | 1 | 97·16 | 3 | 21 35 3·89 | +3·1673 | −0·0074 | | 1637 |
| 1638 | Pegasi ... ... ... | 7·1 | ... | 97·11 | 3 | 21 35 45·78 | +3·0254 | −0·0029 | | 1638 |
| 1639 | Pegasi ... ... ... | 7·0 | 2 | 98·38 | 3 | 21 36 1·02 | +3·0100 | −0·0024 | | 1639 |
| 1640 | 26 Aquarii ... ... ... | 6·0 | 1 | 98·69 | 3 | 21 37 4·09 | +3·0614 | −0·0039 | −0·0017 | 1640 |
| 1641 | Pegasi ... ... ... | 7·5 | 1 | 99·73 | 3 | 21 37 7·72 | +3·0129 | −0·0025 | | 1641 |
| 1642 | 7 Pegasi ... ... ... | 5·7 | ... | 98·71 | 3 | 21 37 15·28 | +3·0014 | −0·0021 | +0·0009 | 1642 |
| 1643 | 8 Pegasi ... ... $\epsilon$ | 2·7 | ... | 97·91 | 6 | 21 39 16·42 | +2·9450 | −0·0005 | +0·0008 | 1643 |
| 1644 | Pegasi ... ... ... | 7·7* | ... | 97·38 | 3 | 21 39 44·39 | +3·0387 | −0·0031 | | 1644 |
| 1645 | 11 Cephei ... ... ... | 5·0 | ... | 01·73 | 3 | 21 40 27·56 | +0·8710 | −0·0338 | +0·0207 | 1645 |
| 1646 | 49 Capricorni ... ... $\delta$ | 3·0 | 1 | 98·13 | 8 | 21 41 31·30 | +3·2989 | −0·0127 | +0·0166 | 1646 |
| 1647 | 27 Aquarii ... ... ... | 5·5 | ... | 97·12 | 3 | 21 42 9·66 | +3·0434 | −0·0032 | +0·0009 | 1647 |
| 1648 | Pegasi ... ... ... | 7·8* | ... | 00·71 | 3 | 21 44 50·10 | +3·0110 | −0·0021 | | 1648 |
| 1649 | Aquarii ... ... ... | 9·3* | ... | 03·65 | 3 | 21 45 21·23 | +3·1740 | −0·0078 | | 1649 |
| 1650 | Aquarii ... ... ... | 6·8 | ... | 00·73 | 3 | 21 46 27·01 | +3·0688 | −0·0039 | | 1650 |
| 1651 | 16 Pegasi ... ... ... | 5·2 | 2 | 97·88 | 16 | 21 48 30·65 | +2·7273 | +0·0054 | −0·0005 | 1651 |
| 1652 | Aquarii ... ... ... | 9·0* | ... | 95·72 | 4 | 21 50 9·07 | +3·1169 | −0·0056 | | 1652 |
| 1653 | Pegasi ... ... ... | 7·1 | ... | 00·72 | 3 | 21 50 33·64 | +3·0491 | −0·0032 | | 1653 |
| 1654 | Pegasi ... ... ... | 7·4 | 1 | 96·77 | 3 | 21 52 28·33 | +3·0273 | −0·0023 | | 1654 |
| 1655 | Pegasi ... ... ... | 7·6 | 2 | 00·74 | 3 | 21 53 26·90 | +3·0323 | −0·0025 | −0·0185 | 1655 |
| 1656 | Cephei ... ... ... | 5·4 | ... | 99·72 | 3 | 21 53 49·93 | +1·6913 | +0·0018 | | 1656 |
| 1657 | 28 Aquarii ... ... ... | 5·8 | 1 | 01·72 | 3 | 21 55 58·03 | +3·0712 | −0·0038 | −0·0014 | 1657 |
| 1658 | 16 Cephei ... ... ... | 5·1 | ... | 99·71 | 3 | 21 57 49·31 | +0·8910 | −0·0376 | −0·0144 | 1658 |
| 1659 | Pegasi ... ... ... | 7·5 | 2 | 99·74 | 3 | 21 58 23·41 | +3·0140 | −0·0016 | | 1659 |
| 1660 | 22 Pegasi ... ... $\nu$ | 5·4 | 1 | 96·76 | 3 | 22 0 38·17 | +3·0196 | −0·0017 | +0·0049 | 1660 |
| 1661 | 34 Aquarii ... ... $a$ | 3·2 | ... | 97·57 | 17 | 22 0 38·83 | +3·0821 | −0·0041 | −0·0008 | 1661 |
| 1662 | Pegasi ... ... ... | 7·1 | 1 | 01·72 | 3 | 22 1 33·82 | +3·0502 | −0·0028 | | 1662 |
| 1663 | 24 Pegasi ... ... $\iota$ | 4·0 | ... | 00·03 | 4 | 22 2 21·27 | +2·7686 | +0·0061 | +0·0209 | 1663 |
| 1664 | Pegasi ... ... ... | 7·2 | 1 | 97·38 | 3 | 22 4 4·44 | +3·0473 | −0·0026 | | 1664 |
| 1665 | Pegasi ... ... ... | 7·5 | 3 | 98·69 | 3 | 22 4 57·09 | +3·0322 | −0·0020 | | 1665 |

1643. Reddish. 1661. Orange.

| No. | Mean Year and Fraction of Year. | Number of Observations. | Mean N.P.D. | Precess. | Sec. Var. | Proper Motion. | Auwers' Bradley, 1755. | Lalande, 1800. | Weisse's Bessel (1), 1825. | Albany (A. G.), 1875. | Radcliffe, 1890. | Greenwich, 1890. | B.D. | No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ° ′ ″ | ″ | ″ | ″ | | | | | | | ° | |
| 1621 | 98·38 | 3 | 89 19 29·1 | −15·436 | −0·279 | +0·185 | | 41685 | 433 | | | | +0 4726 | 1621 |
| 1622 | 97·08 | 3 | 85 2 28·4 | −15·489 | −0·271 | | | 41723 | 461 | 7506 | | | +4 4675 | 1622 |
| 1623 | 01·74 | 3 | 87 15 13·6 | −15·528 | −0·273 | | | 41742 | 476 | 7507 | | | +2 4362 | 1623 |
| 1624 | 01·83 | 8 | 66 47 58·6 | −15·661 | −0·241 | −0·002 | 2798 | 41836 | | | | 5871 | +23 4325 | 1624 |
| 1625 | 98·37 | 3 | 86 37 16·7 | −15·708 | −0·267 | | | 41859 | 553 | 7528 | | | +3 4568 | 1625 |
| 1626 | 98·10 | 3 | 96 0 40·3 | −15·709 | −0·280 | +0·001 | 2797 | 41840 | | | 5805 | 5878 | −6 5770 | 1626 |
| 1627 | 96·79 | 3 | 85 52 46·3 | −15·810 | −0·264 | | | 41927 | 600 | 7535 | | | +3 4575 | 1627 |
| 1628 | 01·73 | 3 | 51 54 58·7 | −15·884 | −0·210 | | | 42034 | | | | | +37 4346 | 1628 |
| 1629 | 98·08 | 3 | 88 36 55·6 | −15·889 | −0·265 | +0·004 | 2804 | 41991 | 645 | 7548 | | | +1 4503 | 1629 |
| 1630 | 98·68 | 3 | 89 28 5·0 | −15·924 | −0·265 | | | 42026 | 664 | | | | +0 4750 | 1630 |
| 1631 | 00·40 | 3 | 51 54 51·0 | −15·946 | −0·209 | −0·105 | 2809 | 42078 | | | | 5909 | +37 4359 | 1631 |
| 1632 | 97·07 | 3 | 98 18 10·1 | −16·037 | −0·273 | +0·022 | 2808 | 42098 | | | 5832 | 5917 | −8 5701 | 1632 |
| 1633 | 97·38 | 3 | 85 45 59·4 | −16·039 | −0·257 | | | | | 7557 | | | +4 4706 | 1633 |
| 1634 | 99·18 | 4 | 50 2 8·9 | −16·063 | −0·203 | −0·009 | 2818 | 42169 | | | 5835 | 5924 | +39 4612 | 1634 |
| 1635 | 98·40 | 3 | 84 40 46·2 | −16·094 | −0·254 | −0·031 | 2813 | 42155 | 743 | 7562 | | | +5 4834 | 1635 |
| 1636 | 98·70 | 3 | 88 12 22·3 | −16·144 | −0·257 | +0·072 | 2817 | 42189 | 766 | 7565 | | | +1 4517 | 1636 |
| 1637 | 97·16 | 3 | 96 49 17·7 | −16·174 | −0·266 | | | | 777 | | | | −7 5611 | 1637 |
| 1638 | 97·11 | 3 | 86 33 25·1 | −16·210 | −0·253 | | | | 806 | 7576 | | | +3 4599 | 1638 |
| 1639 | 98·38 | 3 | 85 25 59·0 | −16·223 | −0·251 | | | 42249 | 815 | 7577 | | | +4 4722 | 1639 |
| 1640 | 98·69 | 3 | 89 10 12·4 | −16·277 | −0·254 | +0·020 | 2822 | 42283 | 834 | | | | +0 4770 | 1640 |
| 1641 | 99·73 | 3 | 85 37 14·6 | −16·280 | −0·250 | | | 42287 | 841 | 7580 | | | +4 4726 | 1641 |
| 1642 | 98·71 | 3 | 84 46 31·1 | −16·287 | −0·248 | +0·005 | 2824 | 42295 | 847 | 7582 | | | +5 4850 | 1642 |
| 1643 | 98·55 | 3 | 80 35 0·5 | −16·389 | −0·240 | −0·011 | 2835 | 42370 | 898 | | 5859 | 5986 | +9 4891 | 1643 |
| 1644 | 97·38 | 3 | 87 28 1·4 | −16·413 | −0·248 | | | 42384 | | 7593 | | | +2 4404 | 1644 |
| 1645 | 01·01 | 11 | 19 8 56·6 | −16·449 | −0·066 | −0·080 | 2856 | | | | 5865 | 5997 | +70 1193 | 1645 |
| 1646 | 01·11 | 3 | 106 34 51·3 | −16·502 | −0·266 | +0·297 | 2847 | 42423 | | | 5871 | 5998 | −16 5943 | 1646 |
| 1647 | 97·12 | 3 | 87 46 34·9 | −16·534 | −0·244 | +0·010 | 2849 | 42461 | 962 | 7601 | | | +2 4414 | 1647 |
| 1648 | 00·71 | 3 | 85 15 12·5 | −16·665 | −0·237 | | | 42551 | 1012 | 7624 | | | +4 4753 | 1648 |
| 1649 | 03·65 | 3 | 97 46 51·6 | −16·690 | −0·249 | | | | | | | | −7 5648 | 1649 |
| 1650 | 00·73 | 3 | 89 41 50·2 | −16·743 | −0·239 | | | 42600 | 1044 | | 5893 | | +0 4787 | 1650 |
| 1651 | 00·05 | 3 | 64 32 43·4 | −16·841 | −0·209 | +0·002 | 2864 | 42679 | | | 5899 | 6040 | +25 4635 | 1651 |
| 1652 | 95·72 | 3 | 93 31 10·6 | −16·919 | −0·237 | | | 42716 | | | | | −3 5333 | 1652 |
| 1653 | 00·72 | 3 | 88 6 45·1 | −16·938 | −0·231 | | | 42723 | 1128 | 7644 | | | +1 4560 | 1653 |
| 1654 | 96·77 | 3 | 86 19 3·5 | −17·027 | −0·226 | | | 42794 | 1175 | 7654 | | | +3 4640 | 1654 |
| 1655 | 00·74 | 3 | 86 41 47·9 | −17·072 | −0·225 | +0·158 | | 42843 | 1200 | 7657 | | | +3 4644 | 1655 |
| 1656 | 98·70 | 4 | 26 51 2·1 | −17·090 | −0·122 | | | | | | 5918 | 6078 | +62 2007 | 1656 |
| 1657 | 01·72 | 3 | 89 52 31·3 | −17·187 | −0·223 | +0·001 | 2875 | 42913 | 1250 | | 5923 | | −0 4296 | 1657 |
| 1658 | 02·29 | 14 | 17 17 45·8 | −17·269 | −0·059 | +0·176 | 2900 | | | | 5931 | 6101 | +72 1009 | 1658 |
| 1659 | 99·74 | 3 | 85 2 32·0 | −17·295 | −0·215 | | | 43002 | | 7674 | | | +4 4791 | 1659 |
| 1660 | 96·76 | 3 | 85 25 48·8 | −17·393 | −0·212 | −0·107 | 2891 | 43065 | | 7686 | | 6117 | +4 4800 | 1660 |
| 1661 | 97·54 | 4 | 90 48 19·8 | −17·394 | −0·216 | −0·002 | 2890 | 43052 | 1345 | | 5939 | 6118 | −1 4246 | 1661 |
| 1662 | 01·72 | 3 | 88 2 50·8 | −17·434 | −0·212 | | | | | 7695 | | | +1 4584 | 1662 |
| 1663 | 99·98 | 4 | 65 8 35·8 | −17·468 | −0·191 | −0·020 | 2899 | 43137 | | | 5950 | 6139 | +24 4533 | 1663 |
| 1664 | 97·38 | 3 | 87 45 19·7 | −17·541 | −0·208 | | | 43190 | 16 | 7705 | | | +2 4474 | 1664 |
| 1665 | 98·69 | 3 | 86 23 28·1 | −17·578 | −0·205 | | | 43220 | 33 | 7710 | | | +3 4672 | 1665 |

1621, 1655. Authority for Proper Motions: Bossert.

| No. | Constellation. | Magnitude. | Number of Estimations. | Mean Year and Fraction of Year. | Number of Observations. | Mean R.A. | Precess. | Sec. Var. | Proper Motion. | No. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | h. m. s. | s. | s. | s. | |
| 1666 | 24 Cephei ... ... ... | 5·0 | ... | 00·72 | 3 | 22 7 53·26 | +1·1567 | −0·0225 | +0·0021 | 1666 |
| 1667 | Aquarii ... ... ... | 9·1 | 2 | 98·08 | 3 | 22 7 53·45 | +3·2582 | −0·0123 | | 1667 |
| 1668 | Aquarii ... ... ... | 7·4 | 2 | 99·74 | 3 | 22 8 12·60 | +3·0755 | −0·0036 | | 1668 |
| 1669 | Pegasi ... ... ... ... | 7·0 | 4 | 97·42 | 3 | 22 9 43·86 | +3·0318 | −0·0017 | | 1669 |
| 1670 | Pegasi ... ... ... ... | 7·6 | 4 | 01·72 | 3 | 22 10 35·69 | +3·0322 | −0·0017 | | 1670 |
| 1671 | 43 Aquarii ... ... $\theta$ | 4·3 | ... | 97·89 | 8 | 22 11 33·38 | +3·1614 | −0·0075 | +0·0057 | 1671 |
| 1672 | Pegasi ... ... ... ... | 7·3 | 2 | 97·16 | 3 | 22 12 27·40 | +3·0236 | −0·0012 | | 1672 |
| 1673 | Lacertae ... ... ... | 7·4 | 1 | 97·78 | 4 | 22 14 45·95 | +2·3101 | +0·0144 | | 1673 |
| 1674 | Pegasi ... ... ... ... | 8·0 | 1 | 99·73 | 3 | 22 15 1·21 | +3·0492 | −0·0022 | | 1674 |
| 1675 | 30 Pegasi ... ... ... ... | 5·4 | ... | 97·74 | 3 | 22 15 25·61 | +3·0182 | −0·0008 | −0·0010 | 1675 |
| 1676 | 48 Aquarii ... ... $\gamma$ | 3·8 | ... | 97·53 | 8 | 22 16 29·43 | +3·0920 | −0·0041 | +0·0068 | 1676 |
| 1677 | 32 Pegasi ... ... ... ... | 5·0 | ... | 00·76 | 4 | 22 16 42·21 | +2·7653 | +0·0083 | −0·0001 | 1677 |
| 1678 | 52 Aquarii ... ... $\pi$ | 4·5 | 1 | 98·27 | 4 | 22 20 10·09 | +3·0642 | −0·0027 | −0·0012 | 1678 |
| 1679 | 34 Pegasi ... ... ... ... | 5·9 | ... | 96·79 | 3 | 22 21 32·00 | +3·0349 | −0·0012 | +0·0171 | 1679 |
| 1680 | 35 Pegasi ... ... ... ... | 5·0 | 1 | 96·83 | 3 | 22 22 47·69 | +3·0324 | −0·0010 | +0·0031 | 1680 |
| 1681 | 37 Pegasi ... ... ... ... | 6·0 | 1 | 97·87 | 3 | 22 24 54·54 | +3·0358 | −0·0011 | −0·0037 | 1681 |
| 1682 | 57 Aquarii ... ... $\sigma$ | 4·8 | ... | 98·96 | 14 | 22 25 21·34 | +3·1788 | −0·0087 | −0·0011 | 1682 |
| 1683 | Pegasi ... ... ... ... | 7·5 | 1 | 97·15 | 3 | 22 25 36·85 | +3·0370 | −0·0011 | −0·0033 | 1683 |
| 1684 | Pegasi ... ... ... ... | 7·7* | ... | 97·39 | 3 | 22 27 16·77 | +3·0537 | −0·0018 | | 1684 |
| 1685 | Pegasi ... ... ... ... | 8·0* | ... | 96·80 | 3 | 22 27 41·67 | +3·0499 | −0·0016 | −0·0050 | 1685 |
| 1686 | Aquarii ... ... ... | 7·0 | ... | 99·74 | 3 | 22 29 28·98 | +3·0720 | −0·0027 | −0·0040 | 1686 |
| 1687 | Pegasi ... ... ... ... | 8·5 | 1 | 00·76 | 3 | 22 30 11·75 | +3·0241 | −0·0001 | | 1687 |
| 1688 | 62 Aquarii ... ... $\eta$ | 4·1 | ... | 98·34 | 9 | 22 30 13·03 | +3·0784 | −0·0030 | +0·0042 | 1688 |
| 1689 | 31 Cephei ... ... ... | 5·2 | ... | 02·77 | 3 | 22 33 17·88 | +1·4452 | −0·0073 | +0·0416 | 1689 |
| 1690 | Pegasi ... ... ... ... | 7·3 | 1 | 97·12 | 3 | 22 33 45·96 | +3·0383 | −0·0006 | | 1690 |
| 1691 | Pegasi ... ... ... ... | 7·8* | ... | 00·74 | 3 | 22 34 44·63 | +3·0496 | −0·0012 | | 1691 |
| 1692 | Pegasi ... ... ... ... | 7·0 | 2 | 96·82 | 3 | 22 35 22·61 | +3·0385 | −0·0005 | +0·0039 | 1692 |
| 1693 | 42 Pegasi ... ... ... $\zeta$ | 3·6 | ... | 98·38 | 10 | 22 36 28·43 | +2·9861 | +0·0024 | +0·0044 | 1693 |
| 1694 | 43 Pegasi ... ... ... $o$ | 4·8 | ... | 01·76 | 3 | 22 37 3·61 | +2·8127 | +0·0105 | −0·0009 | 1694 |
| 1695 | Pegasi ... ... ... ... | 7·4 | 2 | 98·12 | 3 | 22 37 17·43 | +3·0343 | −0·0002 | | 1695 |
| 1696 | Pegasi ... ... ... ... | 6·9 | 3 | 98·39 | 3 | 22 37 49·10 | +3·0363 | −0·0002 | | 1696 |
| 1697 | Aquarii ... ... ... | 7·3 | 1 | 98·72 | 3 | 22 37 51·47 | +3·0670 | −0·0020 | | 1697 |
| 1698 | 44 Pegasi ... ... ... $\eta$ | 3·0 | ... | 99·23 | 3 | 22 38 18·69 | +2·8067 | +0·0110 | +0·0001 | 1698 |
| 1699 | Pegasi ... ... ... ... | 7·5 | 1 | 97·10 | 3 | 22 38 45·18 | +3·0455 | −0·0007 | +0·0100 | 1699 |
| 1700 | Pegasi ... ... ... ... | 7·4 | 1 | 97·13 | 3 | 22 40 16·74 | +3·0475 | −0·0007 | | 1700 |
| 1701 | Aquarii ... ... ... | 7·4 | 1 | 97·14 | 3 | 22 40 17·23 | +3·0630 | −0·0017 | | 1701 |
| 1702 | Pegasi ... ... ... ... | 7·5 | 1 | 97·12 | 3 | 22 42 26·13 | +3·0311 | +0·0004 | +0·0030 | 1702 |
| 1703 | Pegasi ... ... ... ... | 7·3 | 3 | 98·10 | 3 | 22 43 51·39 | +3·0440 | −0·0003 | +0·0050 | 1703 |
| 1704 | 48 Pegasi ... ... ... $\mu$ | 3·7 | ... | 99·60 | 5 | 22 45 10·49 | +2·8812 | +0·0091 | +0·0096 | 1704 |
| 1705 | Pegasi ... ... ... ... | 7·0 | 2 | 98·45 | 3 | 22 45 33·49 | +3·0463 | −0·0003 | −0·0020 | 1705 |
| 1706 | Pegasi ... ... ... ... | 7·3 | 2 | 98·06 | 3 | 22 46 37·16 | +3·0414 | +0·0001 | | 1706 |
| 1707 | 73 Aquarii ... ... $\lambda$ | 3·8 | ... | 97·97 | 11 | 22 47 23·83 | +3·1321 | −0·0062 | −0·0016 | 1707 |
| 1708 | Pegasi ... ... ... ... | 7·0 | 5 | 97·79 | 3 | 22 47 27·68 | +3·0508 | −0·0005 | | 1708 |
| 1709 | Piscium ... ... ... | 7·3 | 1 | 98·71 | 3 | 22 48 45·69 | +3·0634 | −0·0012 | | 1709 |
| 1710 | 1 Piscium ... ... ... | 6·7 | 2 | 98·42 | 3 | 22 49 52·51 | +3·0690 | −0·0016 | +0·0003 | 1710 |

1673. A star (B.D. + 51° 3329), magnitude 8, follows about 27ˢ, and is about 1′ north.
1696. Slightly reddish.

| No. | Mean Year and Fraction of Year. | Number of Observations. | Mean N.P.D. | Precess. | Sec. Var. | Proper Motion. | Auwers' Bradley, 1755. | Lalande, 1800. | Weisse's Bessel (1), 1825. | Albany (A. G.), 1875. | Radcliffe, 1890. | Greenwich, 1890. | B.D. | No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ° ′ ″ | ″ | ″ | ″ | | | | | | | ° | |
| 1666 | 01·53 | 9 | 18 9 4·9 | −17·700 | −0·072 | +0·007 | 2932 | | | | 5974 | 6180 | +71 1111 | 1666 |
| 1667 | 98·08 | 3 | 106 27 1·7 | −17·700 | −0·216 | | | | | | | | −16 6043 | 1667 |
| 1668 | 99·74 | 3 | 90 15 9·9 | −17·714 | −0·203 | | | | 98 | | 5975 | | − 0 4322 | 1668 |
| 1669 | 97·42 | 3 | 86 12 52·2 | −17·776 | −0·197 | | | 43396 | | 7732 | | | + 3 4687 | 1669 |
| 1670 | 01·72 | 3 | 86 13 32·6 | −17·811 | −0·195 | | | 43422 | 158 | 7736 | | | + 3 4689 | 1670 |
| 1671 | 99·71 | 3 | 98 16 52·0 | −17·849 | −0·202 | +0·019 | 2929 | 43453 | 178 | | 5989 | 6202 | − 8 5845 | 1671 |
| 1672 | 97·16 | 3 | 85 21 18·1 | −17·885 | −0·192 | | | 43501 | 198 | 7744 | | | + 4 4837 | 1672 |
| 1673 | 97·78 | 4 | 37 50 42·1 | −17·975 | −0·142 | | | 43599 | | | | 6218 | +51 3324 | 1673 |
| 1674 | 99·73 | 3 | 87 43 9·3 | −17·985 | −0·189 | | | 43571 | 247 | 7748 | | | + 2 4493 | 1674 |
| 1675 | 97·74 | 3 | 84 42 46·7 | −18·001 | −0·186 | +0·005 | 2941 | 43581 | 260 | 7750 | | | + 5 4998 | 1675 |
| 1676 | 98·77 | 3 | 91 53 28·8 | −18·042 | −0·189 | −0·017 | 2943 | 43616 | 280 | | 6004 | 6223 | − 2 5741 | 1676 |
| 1677 | 98·73 | 4 | 62 10 23·0 | −18·050 | −0·168 | +0·003 | 2946 | 43639 | | | 6005 | 6226 | +27 4299 | 1677 |
| 1678 | 98·27 | 4 | 89 7 48·5 | −18·180 | −0·181 | +0·004 | 2952 | 43752 | 377 | | | | + 0 4872 | 1678 |
| 1679 | 96·79 | 3 | 86 6 59·1 | −18·230 | −0·177 | −0·042 | 2957 | 43809 | 404 | 7771 | | | + 3 4705 | 1679 |
| 1680 | 96·83 | 3 | 85 48 21·0 | −18·275 | −0·174 | +0·300 | 2959 | 43851 | 439 | 7776 | | | + 3 4710 | 1680 |
| 1681 | 97·87 | 3 | 86 4 34·5 | −18·351 | −0·171 | +0·137 | 2965 | 43929 | 472 | 7780 | | | + 3 4713 | 1681 |
| 1682 | 99·92 | 5 | 101 11 22·4 | −18·366 | −0·178 | +0·037 | 2966 | 43939 | 480 | | 6040 | 6289 | −11 5850 | 1682 |
| 1683 | 97·15 | 3 | 86 10 48·3 | −18·376 | −0·169 | +0·044 | | 43961 | 486 | 7789 | | | + 3 4716 | 1683 |
| 1684 | 97·39 | 3 | 87 55 36·4 | −18·433 | −0·167 | | | 44021 | | 7796 | | | + 1 4623 | 1684 |
| 1685 | 96·80 | 3 | 87 30 26·7 | −18·448 | −0·166 | +0·110 | | 44040 | 529 | 7798 | | | + 2 4516 | 1685 |
| 1686 | 99·74 | 3 | 89 55 8·8 | −18·508 | −0·164 | +0·080 | | 44096 | 574 | | 6052 | | − 0 4383 | 1686 |
| 1687 | 00·76 | 3 | 84 33 49·5 | −18·532 | −0·160 | | | | 583 | | | | + 5 5036 | 1687 |
| 1688 | 01·14 | 3 | 90 37 58·0 | −18·533 | −0·163 | +0·053 | 2979 | 44131 | 582 | | 6054 | 6330 | − 0 4384 | 1688 |
| 1689 | 01·85 | 8 | 16 52 33·3 | −18·634 | −0·070 | −0·023 | 2994 | | | | 6065 | 6354 | +72 1049 | 1689 |
| 1690 | 97·12 | 3 | 85 59 22·6 | −18·649 | −0·155 | | | 44266 | 665 | 7836 | | | + 3 4745 | 1690 |
| 1691 | 00·74 | 3 | 87 16 42·7 | −18·681 | −0·154 | | | 44309 | 686 | 7839 | | | + 2 4542 | 1691 |
| 1692 | 96·82 | 3 | 85 56 34·8 | −18·701 | −0·152 | +0·159 | | 44325 | 698 | 7842 | | | + 3 4751 | 1692 |
| 1693 | 01·72 | 3 | 79 41 26·5 | −18·735 | −0·147 | +0·018 | 2992 | 44376 | 720 | | 6075 | 6373 | +10 4797 | 1693 |
| 1694 | 00·41 | 6 | 61 12 51·5 | −18·754 | −0·137 | +0·031 | 2999 | 44411 | | | | | +28 4436 | 1694 |
| 1695 | 98·12 | 3 | 85 20 57·7 | −18·761 | −0·148 | | | 44406 | 743 | 7851 | | | + 4 4894 | 1695 |
| 1696 | 98·39 | 3 | 85 33 17·5 | −18·777 | −0·147 | | | 44430 | 760 | 7855 | | | + 4 4896 | 1696 |
| 1697 | 98·72 | 3 | 89 18 20·5 | −18·778 | −0·149 | | | | | | | | + 0 4912 | 1697 |
| 1698 | 00·54 | 3 | 60 18 6·2 | −18·792 | −0·134 | +0·033 | 3003 | 44455 | | | 6085 | 6382 | +29 4741 | 1698 |
| 1699 | 97·10 | 3 | 86 38 48·3 | −18·805 | −0·146 | −0·330 | | 44458 | 772 | 7859 | | | + 3 4763 | 1699 |
| 1700 | 97·13 | 3 | 86 50 7·0 | −18·851 | −0·143 | | | 44513 | 805 | 7869 | | | + 2 4555 | 1700 |
| 1701 | 97·14 | 3 | 88 46 17·9 | −18·852 | −0·144 | | | | 804 | 7870 | | | + 0 4921 | 1701 |
| 1702 | 97·12 | 3 | 84 38 11·0 | −18·915 | −0·139 | +0·070 | | 44582 | 845 | 7881 | | | + 5 5077 | 1702 |
| 1703 | 98·10 | 3 | 86 14 2·0 | −18·956 | −0·137 | +0·100 | | 44631 | 874 | 7886 | | | + 3 4776 | 1703 |
| 1704 | 00·73 | 3 | 65 55 34·7 | −18·993 | −0·126 | +0·042 | 3016 | 44667 | | | 6108 | 6430 | +23 4615 | 1704 |
| 1705 | 98·45 | 3 | 86 27 35·8 | −19·004 | −0·134 | +0·080 | | 44672 | 908 | 7895 | | | + 3 4782 | 1705 |
| 1706 | 98·06 | 3 | 85 44 39·4 | −19·033 | −0·132 | | | 44712 | 925 | 7904 | | | + 4 4916 | 1706 |
| 1707 | 98·27 | 4 | 98 6 42·0 | −19·054 | −0·134 | −0·040 | 3019 | 44728 | 931 | | 6114 | 6441 | − 8 5968 | 1707 |
| 1708 | 97·79 | 3 | 86 58 43·4 | −19·056 | −0·130 | | | 44743 | 938 | 7906 | | | + 2 4573 | 1708 |
| 1709 | 98·71 | 3 | 88 41 18·3 | −19·091 | −0·129 | | | 44782 | 967 | 7913 | | | + 1 4662 | 1709 |
| 1710 | 98·42 | 3 | 89 28 5·1 | −19·121 | −0·127 | +0·005 | 3030 | 44824 | 988 | | | | + 0 4939 | 1710 |

1683, 1702, 1705. Authority for Proper Motions: Boss. 1685, 1703. The Proper Motions have been specially computed for the present catalogue. 1686. Authority for Proper Motions: Radcliffe, 1890, 6052. 1692. Authority for Proper Motions: Bossert. 1699. Authority for Proper Motions: Porter.

| No. | Constellation. | Magnitude. | Number of Estimations. | Mean Year and Fraction of Year. | Number of Observations. | Mean R.A. | Precess. | Sec. Var. | Proper Motion. | No. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | h. m. s. | s. | s. | s. | |
| 1711 | 24 Piscis Australis α | 1·3 | ... | 99·74 | 4 | 22 52 7·51 | +3·2994 | −0·0209 | +0·0232 | 1711 |
| 1712 | Piscium ... ... ... | 6·3 | 1 | 96·79 | 3 | 22 52 27·26 | +3·0505 | −0·0001 | | 1712 |
| 1713 | Piscium ... ... ... | 7·3 | ... | 97·13 | 3 | 22 54 14·15 | +3·0474 | +0·0003 | | 1713 |
| 1714 | 2 Piscium ... ... ... | 6·0 | 1 | 98·11 | 3 | 22 54 19·93 | +3·0699 | −0·0014 | +0·0039 | 1714 |
| 1715 | Piscium ... ... ... | 7·7 | 1 | 97·46 | 3 | 22 54 54·82 | +3·0424 | +0·0007 | | 1715 |
| 1716 | Piscium ... ... ... | 6·0 | ... | 97·78 | 3 | 22 55 37·10 | +3·0567 | −0·0003 | −0·0001 | 1716 |
| 1717 | Piscium ... ... ... | 7·2 | 1 | 98·73 | 3 | 22 56 34·07 | +3·0476 | +0·0004 | +0·0006 | 1717 |
| 1718 | Piscium ... ... ... | 6·7 | 1 | 98·75 | 3 | 22 56 37·94 | +3·0536 | 0·0000 | +0·0010 | 1718 |
| 1719 | 4 Piscium ... ... β | 4·6 | ... | 96·81 | 3 | 22 58 47·20 | +3·0525 | +0·0002 | −0·0003 | 1719 |
| 1720 | 54 Pegasi ... ... α | 2·6 | ... | 99·54 | 8 | 22 59 46·68 | +2·9818 | +0·0058 | +0·0028 | 1720 |
| 1721 | Piscium ... ... ... | 7·0 | 1 | 98·08 | 3 | 23 0 10·52 | +3·0681 | −0·0010 | | 1721 |
| 1722 | 86 Aquarii ... ... $c^1$ | 4·7 | ... | 94·84 | 3 | 23 1 18·56 | +3·2255 | −0·0157 | +0·0039 | 1722 |
| 1723 | Piscium ... ... ... | 7·0 | 2 | 98·11 | 3 | 23 1 56·45 | +3·0580 | 0·0000 | | 1723 |
| 1724 | Piscium ... ... ... | 7·5 | 2 | 98·74 | 3 | 23 2 58·33 | +3·0478 | +0·0010 | | 1724 |
| 1725 | 5 Piscium ... ... A | 5·6 | ... | 97·31 | 4 | 23 3 33·54 | +3·0637 | −0·0004 | +0·0075 | 1725 |
| 1726 | 33 Cephei ... ... π | 4·6 | ... | 01·54 | 3 | 23 4 43·07 | +1·8935 | +0·0244 | +0·0038 | 1726 |
| 1727 | Piscium ... ... ... | 6·7 | 1 | 96·82 | 3 | 23 6 9·12 | +3·0484 | +0·0012 | | 1727 |
| 1728 | Piscium ... ... ... | 8·0* | ... | 98·11 | 3 | 23 8 34·51 | +3·0641 | −0·0001 | | 1728 |
| 1729 | Piscium ... ... ... | 6·9 | ... | 96·86 | 3 | 23 8 55·40 | +3·0497 | +0·0014 | | 1729 |
| 1730 | Piscium ... ... ... | 7·5 | 1 | 01·78 | 3 | 23 10 32·03 | +3·0689 | −0·0004 | +0·0124 | 1730 |
| 1731 | 6 Piscium ... ... γ | 4·0 | 1 | 99·05 | 15 | 23 11 58·83 | +3·0594 | +0·0006 | +0·0487 | 1731 |
| 1732 | Aquarii ... ... ... | 9·5 | 1 | 98·14 | 3 | 23 12 11·88 | +3·0997 | −0·0037 | | 1732 |
| 1733 | 7 Piscium ... ... b | 5·4 | 2 | 96·85 | 3 | 23 15 14·70 | +3·0508 | +0·0019 | +0·0032 | 1733 |
| 1734 | Aquarii ... ... ... | 7·0 | 1 | 95·08 | 4 | 23 16 12·21 | +3·0959 | −0·0033 | | 1734 |
| 1735 | Piscium ... ... ... | 7·8* | ... | 96·79 | 3 | 23 17 46·73 | +3·0630 | +0·0007 | | 1735 |
| 1736 | Piscium ... ... ... | 6·7 | ... | 97·16 | 3 | 23 19 10·40 | +3·0596 | +0·0013 | | 1736 |
| 1737 | Piscium ... ... ... | 7·3 | 1 | 97·49 | 3 | 23 21 37·09 | +3·0652 | +0·0008 | | 1737 |
| 1738 | 8 Piscium ... ... κ | 4·9 | ... | 98·62 | 12 | 23 21 48·32 | +3·0700 | +0·0001 | +0·0041 | 1738 |
| 1739 | Piscium ... ... ... | 6·4 | ... | 98·17 | 3 | 23 22 7·33 | +3·0705 | +0·0001 | | 1739 |
| 1740 | 70 Pegasi ... ... q | 4·7 | ... | 00·47 | 3 | 23 24 5·76 | +3·0276 | +0·0061 | +0·0013 | 1740 |
| 1741 | Piscium ... ... ... | 7·2 | 1 | 97·77 | 3 | 23 25 7·63 | +3·0569 | +0·0022 | | 1741 |
| 1742 | Piscium ... ... ... | 7·1 | ... | 98·79 | 3 | 23 25 59·30 | +3·0665 | +0·0009 | | 1742 |
| 1743 | Cephei ... ... ... | 9·5* | ... | 01·22 | 3 | 23 27 3·16 | +1·7606 | +0·0304 | | 1743 |
| 1744 | Cephei ... ... ... | 9·5* | ... | 01·22 | 3 | 23 27 15·36 | +1·7672 | +0·0310 | | 1744 |
| 1745 | Cephei ... ... ... | 5·6 | ... | 00·70 | 4 | 23 27 48·92 | −0·2286 | −0·5974 | +0·0875 | 1745 |
| 1746 | Piscium ... ... ... | 8·0* | ... | 97·47 | 3 | 23 28 16·97 | +3·0596 | +0·0020 | | 1746 |
| 1747 | Piscium ... ... ... | 7·3 | 1 | 97·16 | 3 | 23 29 18·48 | +3·0574 | +0·0027 | | 1747 |
| 1748 | 15 Piscium ... ... ... | 7·0 | 1 | 98·44 | 3 | 23 30 21·78 | +3·0704 | +0·0006 | −0·0049 | 1748 |
| 1749 | Piscium ... ... ... | 8·0* | ... | 02·82 | 3 | 23 30 59·15 | +3·0651 | +0·0016 | | 1749 |
| 1750 | 16 Piscium ... ... ... | 5·7 | ... | 97·51 | 3 | 23 31 16·99 | +3·0682 | +0·0011 | −0·0091 | 1750 |
| 1751 | 17 Piscium ... ... ι | 4·3 | ... | 98·21 | 10 | 23 34 48·33 | +3·0597 | +0·0031 | +0·0234 | 1751 |
| 1752 | 35 Cephei ... ... γ | 3·5 | ... | 01·30 | 3 | 23 35 14·41 | +2·4446 | +0·0773 | −0·0199 | 1752 |
| 1753 | 18 Piscium ... ... λ | 4·6 | ... | 97·49 | 3 | 23 36 56·52 | +3·0698 | +0·0012 | −0·0107 | 1753 |
| 1754 | 78 Pegasi ... ... ... | 5·1 | ... | 02·51 | 3 | 23 38 57·56 | +3·0053 | +0·0164 | +0·0053 | 1754 |
| 1755 | 19 Piscium ... ... ... | 5·4 | ... | 97·11 | 3 | 23 41 16·85 | +3·0671 | +0·0024 | −0·0050 | 1755 |

1712, 1716. Reddish. 1723. B.D. magnitude, 8·2; Albany, 7·1. 1731. Orange. 1741. The sign of the Declination in W.B. (1) for this star should be changed. 1755. Red.

| No. | Mean Year and Fraction of Year. | Number of Observations. | Mean N.P.D. | Precess. | Sec. Var. | Proper Motion. | Auwers' Bradley, 1755. | Lalande, 1800. | Weisse's Bessel (1), 1825. | Albany (A. G.), 1875. | Radcliffe, 1890. | Greenwich, 1890. | B.D. | No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ° ′ ″ | ″ | ″ | ″ | | | | | | | ° | |
| 1711 | 99·74 | 4 | 120 9 8·3 | −19·179 | −0·132 | +0·159 | 3032 | 44866 | | | 6140 | 6477 | | 1711 |
| 1712 | 96·79 | 3 | 86 43 31·4 | −19·187 | −0·121 | | | 44887 | 1042 | 7923 | | | +3 4799 | 1712 |
| 1713 | 97·13 | 3 | 86 10 30·3 | −19·232 | −0·118 | | | 44939 | 1081 | 7933 | | | +3 4805 | 1713 |
| 1714 | 98·11 | 3 | 89 34 15·1 | −19·235 | −0·118 | +0·074 | 3036 | 44946 | 1084 | | 6150 | | +0 4950 | 1714 |
| 1715 | 97·46 | 3 | 85 22 34·8 | −19·249 | −0·116 | | | 44966 | 1096 | 7935 | | | +4 4935 | 1715 |
| 1716 | 97·78 | 3 | 87 31 20·9 | −19·266 | −0·115 | +0·078 | | 44993 | 1115 | 7938 | | | +2 4594 | 1716 |
| 1717 | 98·73 | 3 | 86 4 24·1 | −19·289 | −0·113 | +0·133 | | 45030 | 1138 | 7946 | | | +3 4814 | 1717 |
| 1718 | 98·75 | 3 | 87 0 17·8 | −19·291 | −0·113 | +0·043 | 3041 | 45032 | 1140 | 7948 | | | +2 4597 | 1718 |
| 1719 | 96·81 | 3 | 86 43 7·2 | −19·341 | −0·109 | +0·015 | 3046 | 45105 | 1188 | 7957 | 6171 | 6525 | +3 4818 | 1719 |
| 1720 | 00·73 | 3 | 75 19 58·1 | −19·364 | −0·105 | +0·030 | 3050 | 45148 | 1216 | | 6174 | 6531 | +14 4926 | 1720 |
| 1721 | 98·08 | 3 | 89 13 54·5 | −19·373 | −0·107 | | | 45163 | 1220 | | | | +0 4963 | 1721 |
| 1722 | 94·84 | 3 | 114 17 0·4 | −19·398 | −0·111 | −0·002 | 3053 | 45184 | | | 6184 | | | 1722 |
| 1723 | 98·11 | 3 | 87 29 19·7 | −19·412 | −0·103 | | | 45206 | 1257 | 7976 | | | +2 4609 | 1723 |
| 1724 | 98·74 | 3 | 85 40 1·0 | −19·435 | −0·101 | | | 45251 | 1275 | 7981 | | | +4 4963 | 1724 |
| 1725 | 97·31 | 4 | 88 24 59·5 | −19·447 | −0·101 | −0·119 | 3059 | 45279 | 1287 | 7986 | | | +1 4686 | 1725 |
| 1726 | 02·56 | 9 | 15 9 11·6 | −19·472 | −0·058 | +0·041 | 3074 | 45381 | | | | 6561 | +74 1006 | 1726 |
| 1727 | 96·82 | 3 | 85 32 19·1 | −19·501 | −0·095 | | | 45366 | 48 | 8002 | | | +4 4975 | 1727 |
| 1728 | 00·55 | 6 | 88 20 29·3 | −19·550 | −0·091 | | | 45451 | | 8017 | | | +1 4696 | 1728 |
| 1729 | 96·86 | 3 | 85 32 49·5 | −19·556 | −0·090 | | | 45471 | 111 | 8021 | | | +4 4985 | 1729 |
| 1730 | 01·78 | 3 | 89 14 8·7 | −19·587 | −0·087 | +0·030 | | 45525 | 145 | | | | +0 4982 | 1730 |
| 1731 | 97·98 | 5 | 87 15 51·0 | −19·614 | −0·084 | −0·017 | 3082 | 45565 | 176 | 8036 | 6225 | 6600 | +2 4648 | 1731 |
| 1732 | 98·14 | 3 | 95 34 4·1 | −19·618 | −0·085 | | | | | | | | −5 5962 | 1732 |
| 1733 | 96·85 | 3 | 85 9 51·3 | −19·671 | −0·078 | +0·074 | 3092 | 45687 | 257 | 8053 | | | +4 4997 | 1733 |
| 1734 | 95·08 | 4 | 95 13 11·2 | −19·687 | −0·077 | | | | 280 | | 6243 | | −5 5973 | 1734 |
| 1735 | 96·79 | 3 | 87 43 48·0 | −19·713 | −0·073 | | | 45781 | 310 | 8064 | | | +2 4660 | 1735 |
| 1736 | 97·16 | 3 | 86 49 58·0 | −19·735 | −0·071 | | | 45846 | 335 | 8068 | | | +2 4663 | 1736 |
| 1737 | 97·49 | 3 | 88 4 19·9 | −19·772 | −0·066 | | | 45894 | 383 | 8076 | | | +1 4724 | 1737 |
| 1738 | 00·05 | 7 | 89 17 30·1 | −19·774 | −0·066 | +0·102 | 3116 | 45895 | 388 | | 6263 | 6659 | +0 4998 | 1738 |
| 1739 | 98·17 | 3 | 89 25 36·0 | −19·779 | −0·065 | | | 45905 | 392 | | | | +0 4999 | 1739 |
| 1740 | 00·12 | 3 | 77 47 27·7 | −19·807 | −0·060 | −0·030 | 3122 | 45974 | | | | 6670 | +11 5009 | 1740 |
| 1741 | 97·77 | 3 | 85 32 21·3 | −19·820 | −0·059 | | | 46009 | 455 | 8085 | | | +4 5016 | 1741 |
| 1742 | 98·79 | 3 | 88 11 12·1 | −19·832 | −0·058 | | | 46045 | 473 | 8090 | | | +1 4731 | 1742 |
| 1743 | 01·22 | 3 | 8 18 18·6 | −19·845 | −0·028 | | | | | | | | +81 824 | 1743 |
| 1744 | 01·22 | 3 | 8 17 39·9 | −19·848 | −0·028 | | | | | | | | +81 825 | 1744 |
| 1745 | 01·80 | 7 | 3 14 38·8 | −19·855 | +0·013 | −0·004 | 3147 | | | | 6294 | 6693 | +86 344 | 1745 |
| 1746 | 97·47 | 3 | 85 54 44·6 | −19·860 | −0·053 | | | 46138 | 527 | 8102 | | | +3 4870 | 1746 |
| 1747 | 97·16 | 3 | 85 4 55·2 | −19·873 | −0·051 | | | 46169 | 547 | 8111 | | | +4 5029 | 1747 |
| 1748 | 98·44 | 3 | 89 14 21·2 | −19·885 | −0·049 | +0·031 | 3138 | 46212 | 574 | | | | +0 5018 | 1748 |
| 1749 | 02·82 | 3 | 87 24 2·0 | −19·892 | −0·048 | | | | 589 | 8120 | | | +2 4686 | 1749 |
| 1750 | 97·51 | 3 | 88 27 9·6 | −19·895 | −0·047 | −0·061 | 3139 | 46248 | 599 | 8121 | | | +1 4744 | 1750 |
| 1751 | 98·69 | 6 | 84 54 56·3 | −19·931 | −0·040 | +0·443 | 3148 | 46351 | 667 | 8132 | 6318 | 6731 | +4 5035 | 1751 |
| 1752 | 02·21 | 9 | 12 55 32·9 | −19·935 | −0·030 | −0·135 | 3152 | 46419 | | | 6319 | 6736 | +76 928 | 1752 |
| 1753 | 97·49 | 3 | 88 46 13·1 | −19·951 | −0·036 | +0·137 | 3153 | 46445 | 711 | 8141 | 6328 | 6745 | +0 5037 | 1753 |
| 1754 | 00·09 | 3 | 61 11 32·5 | −19·968 | −0·032 | +0·034 | 3160 | 46504 | | | 6336 | 6755 | +28 4627 | 1754 |
| 1755 | 97·11 | 3 | 87 4 5·1 | −19·985 | −0·028 | +0·023 | 3162 | 46575 | 792 | 8154 | | 6764 | +2 4709 | 1755 |

1716. Authority for Proper Motions: Boss. 1717. The Proper Motion adopted is the mean of Boss and Bossert.
1730. Authority for Proper Motions: Bossert.

| No. | Constellation. | Magnitude. | Number of Estimations. | Mean Year and Fraction of Year. | Number of Observations. | Mean R.A. | Precess. | Sec. Var. | Proper Motion. | No. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | h. m. s. | s. | s. | s. | |
| 1756 | Cephei ... ... ... | 10·0 | ... | 98·04 | 3 | 23 42 8·65 | +2·7460 | +0·0747 | | 1756 |
| 1757 | Piscium ... ... ... | 7·2 | 2 | 98·44 | 3 | 23 43 42·17 | +3·0700 | +0·0019 | −0·0013 | 1757 |
| 1758 | Sculptoris ... ... δ | 4·6 | ... | 02·87 | 3 | 23 43 43·05 | +3·1246 | −0·0159 | +0·0067 | 1758 |
| 1759 | Piscium ... ... ... | 8·7* | ... | 01·50 | 3 | 23 43 58·82 | +3·0697 | +0·0020 | +0·0646 | 1759 |
| 1760 | 21 Piscium ... ... ... | 5·6 | ... | 97·84 | 3 | 23 44 20·20 | +3·0719 | +0·0013 | −0·0016 | 1760 |
| 1761 | Piscium ... ... ... | 7·7 | 1 | 96·88 | 3 | 23 45 59·60 | +3·0703 | +0·0020 | | 1761 |
| 1762 | Piscium ... ... ... | 7·5 | 1 | 99·81 | 4 | 23 46 33·42 | +3·0671 | +0·0033 | | 1762 |
| 1763 | Piscium ... ... ... | 7·2 | 2 | 98·92 | 3 | 23 46 46·57 | +3·0671 | +0·0033 | | 1763 |
| 1764 | 22 Piscium ... ... ... | 5·8 | ... | 97·88 | 3 | 23 46 50·63 | +3·0695 | +0·0024 | 0·0000 | 1764 |
| 1765 | 25 Piscium ... ... ... | 6·2 | ... | 97·96 | 3 | 23 47 57·40 | +3·0708 | +0·0020 | −0·0015 | 1765 |
| 1766 | Piscium ... ... ... | 7·8* | ... | 98·82 | 3 | 23 49 11·94 | +3·0693 | +0·0029 | | 1766 |
| 1767 | Piscium ... ... ... | 8·0 | 1 | 98·92 | 4 | 23 49 18·20 | +3·0706 | +0·0023 | | 1767 |
| 1768 | Piscium ... ... ... | 6·9 | ... | 97·45 | 3 | 23 51 39·90 | +3·0692 | +0·0036 | | 1768 |
| 1769 | 84 Pegasi ... ... ... ψ | 4·8 | ... | 01·50 | 3 | 23 52 39·69 | +3·0532 | +0·0151 | −0·0043 | 1769 |
| 1770 | 28 Piscium ... ... ω | 4·0 | ... | 99·14 | 10 | 23 54 10·48 | +3·0690 | +0·0049 | +0·0087 | 1770 |
| 1771 | Piscium ... ... ... | 7·5 | 2 | 96·82 | 3 | 23 57 39·34 | +3·0723 | +0·0026 | +0·0023 | 1771 |
| 1772 | 2 Ceti ... ... ... ... | 4·5 | ... | 99·99 | 9 | 23 58 37·02 | +3·0753 | −0·0078 | −0·0001 | 1772 |

1756. The magnitude given above is only approximate.

| No. | Mean Year and Fraction of Year. | Number of Observations. | Mean N.P.D. | Precess. | Sec. Var. | Proper Motion. | Auwers' Bradley, 1755. | Lalande, 1800. | Weisse's Bessel (1), 1825. | Albany (A.G.), 1875. | Radcliffe, 1890. | Greenwich, 1890. | B.D. | No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ° ′ ″ | ″ | ″ | ″ | | | | | | | ° | |
| 1756 | 98·04 | 3 | 17 39 39·8 | −19·991 | −0·023 | | | | | | | | | 1756 |
| 1757 | 98·30 | 4 | 88 20 25·7 | −20·001 | −0·023 | +0·021 | | 46646 | 850 | 8162 | 6358 | | +1 4773 | 1757 |
| 1758 | 02·87 | 3 | 118 40 58·9 | −20·002 | −0·024 | +0·110 | | 46641 | | | 6359 | 6775 | | 1758 |
| 1759 | 01·79 | 3 | 88 7 40·2 | −20·003 | −0·023 | +0·959 | | 46650 | 853 | 8164 | | | +1 4774 | 1759 |
| 1760 | 97·84 | 3 | 89 28 43·9 | −20·005 | −0·022 | +0·030 | 3167 | 46667 | 861 | | 6361 | 6778 | +0 5054 | 1760 |
| 1761 | 96·88 | 3 | 88 19 6·5 | −20·015 | −0·019 | | | 46711 | 884 | 8176 | | | +1 4786 | 1761 |
| 1762 | 00·87 | 6 | 85 51 32·0 | −20·018 | −0·018 | | | 46737 | 894 | 8177 | | | +3 4899 | 1762 |
| 1763 | 98·92 | 3 | 85 48 39·2 | −20·019 | −0·017 | | | 46742 | 898 | 8178 | | | +3 4900 | 1763 |
| 1764 | 97·88 | 3 | 87 37 32·3 | −20·019 | −0·017 | +0·011 | 3174 | 46744 | 900 | 8179 | 6372 | | +2 4725 | 1764 |
| 1765 | 97·96 | 3 | 88 27 55·5 | −20·024 | −0·015 | +0·005 | 3180 | 46788 | | 8183 | | 6797 | +1 4792 | 1765 |
| 1766 | 98·82 | 3 | 86 52 37·6 | −20·030 | −0·013 | | | | 956 | 8192 | | | +2 4728 | 1766 |
| 1767 | 98·92 | 3 | 88 5 28·6 | −20·030 | −0·012 | | | 46843 | | 8193 | | | +1 4799 | 1767 |
| 1768 | 97·45 | 3 | 85 49 53·9 | −20·039 | −0·008 | | | 46926 | 1006 | 8205 | | | +3 4909 | 1768 |
| 1769 | 01·59 | 5 | 65 24 52·0 | −20·042 | −0·006 | +0·024 | 3186 | 46965 | | | | 6831 | +24 4865 | 1769 |
| 1770 | 99·49 | 3 | 83 41 24·9 | −20·046 | −0·003 | +0·108 | 3191 | 47017 | 1062 | | 6399 | 6850 | +6 5227 | 1770 |
| 1771 | 96·82 | 3 | 88 25 27·6 | −20·051 | +0·004 | +0·071 | | 47148 | 1143 | 8232 | | | +1 4820 | 1771 |
| 1772 | 00·87 | 3 | 107 53 32·6 | −20·052 | +0·006 | −0·005 | 3204 | 47179 | | | 6414 | 6877 | −18 6417 | 1772 |

1757. Authority for Proper Motions: Auwers (Mayer's Sternverzeichnis). 1758. Authority for Proper Motions: Auwers (Astronomische Nachrichten, 3929).
1759. The Proper Motion adopted is the mean of Boss and Bossert.
1771. Authority for Proper Motions: Boss.